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TRAVELS IN EASTERN HIGH ASIA

VOL. I.

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Lt Col. Nicholas Michailovitch Prejevalsky.

MONGOLIA,

THE TANGUT COUNTRY,

AND THE

SOLITUDES OF NORTHERN TIBET:

BEING A

Narrative of Three Years' Travel in Eastern High Asia.

BY

LIEUT.-COLONEL N. PREJEVALSKY,

OF THE RUSSIAN STAFF CORPS: MEM. OF THE IMP. RUSS. GEOG. SOC.

TRANSLATED BY

E. DELMAR MORGAN, F.R.G.S.

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WITH INTRODUCTION AND NOTES BY

COLONEL HENRY YULE, C.B.

LATE OF THE ROYAL ENGINEERS (BENGAL).

IN TWO VOLUMES—VOL. I.

With Maps and Illustrations.

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TRANSLATOR'S PREFACE.

IT WAS at one of the meetings of the Russian Geographical Society in the winter of 1873–74 that Colonel Prejevalsky, then recently returned from his travels, first gave an account of his adventures and experiences in the heart of Asia.

Being personally acquainted with him, and hearing that he was seeking a publisher for an English version of his work, the idea suggested itself to me of becoming the means of making known to English readers these Russian explorations in countries of daily growing interest. The task, however, would have been a difficult one, had I not succeeded in securing the all-valuable co-operation of Colonel Yule, who from beginning to end has assisted me by his ready advice, suggestions, and amendments. To Dr. Hooker, President of the Royal Society, my warmest thanks are also due for his kindness in revising the names of plants.

Most of the illustrations are from photographs lent by Baron Fr. Osten Sacken, late President of the physical section of the Imp. Geog. Soc., and well known in Europe as geographer, explorer, and botanist. He has also furnished the plates 'Ovis

Poli' and 'Gyps Nivicola' from his copy of Severtsoff's work on the Fauna of Turkestan. Of the remaining illustrations I am indebted for that of the Rhubarb Plant to Professor Maximovitch, of the Imperial Botanical Gardens of St. Petersburg; three are from photographs by Mr. J. Thomson, whose splendid photographic albums of China and its people are deservedly admired, and the remainder are borrowed from the 'Tour du Monde.'

In the following translation, while preserving the Author's meaning, I have endeavoured to remove from the path of the reader those stumbling-blocks which might arise from following too closely the original idiom; in this way Russian versts are rendered into English miles, Russian fathoms into feet or yards, degrees of Centigrade into Fahrenheit, old style dates into new style, &c.

I take this opportunity of expressing my thanks to Mr. Clements Markham, C.B., Hon. Sec. R.G.S., for an introduction to the publishers of this work; to Mr. Henry Dresser, F.Z.S.; to Dr. Günther, of the British Museum; to Mr. Robert Harrison, of the London Library; to Mr. Edward Weller, for the care and pains he has bestowed on the accompanying map; and to Mr. Cooper, who has executed the engravings.

It only remains to say a few words about the Author.

Lieut.-Col. Prejevalsky was born in the government of Smolensk of parents belonging to the class of landed gentry. He received his education at the gym-

nasium or public school of Smolensk, finishing his studies at the Academy of the Staff Corps. From early life he displayed a strong love for natural science, and it was to gratify these tastes that he applied for and obtained permission to serve in Eastern Siberia. Thither he proceeded in 1867, and there he remained two years, occupying all the time he could spare from his official duties in hunting, shooting, and collecting objects of natural history. On his return to St. Petersburg in 1869 he published his 'Notes on the Ussuri,' containing a great deal of information on the eastern boundaries of Russia in Asia. Soon after its appearance in 1870 Lieut.-Col. Prejevalsky prepared for his second greater expedition, for which his previous travels and studies had served as a preparation. His companion and helpmate throughout this arduous undertaking was Lieut. Pyltseff. I have only to add that, from a letter recently received from him, I learn that he is preparing for a third expedition, and that he hopes this time to penetrate to Lob-nor, and possibly from that quarter into Tibet.

E. DELMAR MORGAN.

LONDON : *January* 1, 1876.

INTRODUCTORY REMARKS.

By Colonel H. Yule.

WITHIN the last ten years the exploration of High Asia which, on our side at least, had long been languid, has revived and advanced with ample strides. So rapid, indeed, has been the aggression upon the limits of the Unknown that in the contemplation of a future historian of geographical discovery it may easily seem that the contraction of those limits in our age might fitly be compared to the rapid evaporation of the cloud with which the breath has tinged a plate of polished steel.

It is hardly a dozen years since our mapmakers had to rely for the most important positions in Chinese Turkestan on the observations of the Jesuit surveyors of the eighteenth century; and as late as the publication of that well-known work of the Messrs. Michell, 'The Russians in Central Asia,' the issue, in the appendix to that book, of a new and corrected transcript of those data, was regarded as of some geographical moment. The incidental notices contained in fragmentary extracts or translations from medieval Persian writers, and the details given in Chinese geographical works, often hard to understand, often themselves (like Ptolemy's Tables) only a conversion into written statement of the graphic representations of loose and inaccurate maps, were painfully studied by those who desired to enlarge or recompile the geography of the great Central basin which lies between the Himalya and the Thian Shan. Indeed, from Samarkand eastward to the caravan-track which leads from the Russian frontier at Kiakhta to the gate of the Great Wall at Kalgan, a space of 47 degrees of longitude, we were entirely dependent on

such imperfect criticism of fragmentary sources as we have indicated. Almost the only scientific inroad on this immense territory, and that but trifling in its extent though high indeed in interest, was the excursion of Lieut. John Wood of the Indian Navy to the Great Pamir, in the winter of 1838. The scientific exploration and surveys of the Russians were indeed slowly though surely advancing the march of accurate knowledge from the north; but it was confined within the limits, vast indeed, of their own territory, and touched the Thian Shan only near the western extremity of that mountain region.

With ourselves, exploration, in any extensive sense, beyond our Indian frontier had almost ceased for a great many years after the calamities of Kabul; the only notable exceptions that I can call to mind being the advance of that accomplished botanist Dr. T. Thomson to the Karakorum Pass, and the journey of his colleague Capt. Henry Strachey, of the Bengal Army, across the western angle of Tibet Proper, from Ladak to Kumaon, in 1846. But like the Russians on their side, our survey officers had been gradually mastering the ground up to the limits of the states actually held by our feudatory the Maharaja of Jamu and Kashmir, and to those of the small Tibetan provinces near the Sutlej which fell to us as part of the Sikh dominions at the end of the first Punjab war. And so on both sides a base was secured for ulterior raids upon the Terra Incognita.

This Incognita was not indeed unknown in the sense in which Southern Central Africa was unknown before David Livingstone's first journey; such sources as those to which we have referred above gave some general idea of what the region contained. But even where the Jesuit surveyors left maps, they had left, so far as we know, no narrative or description of the regions in question. And of Tibet in particular we had so little accurate knowledge that the latitude of its capital, the 'Eternal Sanctuary,' the Vatican and holy city of half Asia, was uncertain almost to the extent of sixty minutes.

The first memorable incursion into the territory in question was the journey of Huc and Gabet in 1845–46.

The later writings of Huc, pieces of pretentious and untrustworthy bookmaking, have thrown some shadow upon the original narrative; some of his own countrymen have been disposed to look on his work as half a fiction; and stories have even reached me from Russian sources which professed to recount confessions made by Huc of his having invented his own share in the narrative, and of his having received from Gabet on his deathbed, 'on board a boat in the Canton river,' or taken from his luggage after his death, the true journals on which the popular story of the Journey to Lhassa was founded. These stories are imaginative fabrications, as will be seen from the facts we are about to recapitulate. I confess, however, that, judging from the rubbish of Huc's later writings, my own impression long was that Gabet had been the chief author of the *Souvenirs*, and this was confirmed to me by a conversation with which the lamented M. Jules Mohl honoured me during his last visit to England.[1] But his recollection, I now feel satisfied, had deceived him.

In the end of 1846, as Sir John Davis tells us, Mr. A. Johnston, his own secretary as Plenipotentiary in China, in proceeding from Hong Kong to Ceylon, found Père Joseph Gabet, then on his way to France, a fellow-passenger with him, and heard from him many particulars of the journey. Mr. Johnston found these so curious and interesting that he noted down the principal circumstances, and on rejoining his chief presented him with the MS., and Sir John sent it on to Lord Palmerston. 'Nothing more,' adds Sir John Davies, 'was heard of the matter till the appearance of Huc's two volumes' (i.e. in 1851). This is, however, a mistake, as I find by an examination, as careful as my time

[1] M. Mohl told me an anecdote of his visiting, about the time of Huc's publication, one of the vicars apostolic from the Eastern Missions,—I think Monseigneur Pallegoix from Siam. The new book was lying on the table, and the bishop apologised, saying he ought to have left it in his bedroom; 'a bishop ought not to be caught reading romances.'

has allowed, of the volumes of the *Annales de la Propagation de la Foi.*

The first notice of the journey that I find in this periodical is in vol. xix. pp. 265 *seqq.* (1847). This, after some introductory matter regarding the origin of the Mission in Mongolia, gives a letter from Huc to M. Etienne, the Supt.-General of the Congregation of the Mission, dated Macao, December 20th, 1846, presenting a sketch of the journey up to their arrival at Lhassa, January 29th, 1846.[1]

The next paper bearing on the subject is in the same volume, and is a *Notice sur la Prière Bouddhique*, by M. Gabet, 'qui vient de rentrer pour quelques mois en France.'

Vol. xx. (p. 5) contains a letter from Gabet to M. Etienne, dated Tarlané, June 1842. It had been mislaid, and thus was not published till 1848. It describes a journey to the Suniút country and the Great Kuren, i.e. Urga. This is the basis of the passages on that subject in the *Souvenirs* (vol. i. pp. 133 *seqq.*).

In the same volume, p. 118, we have an extract from a report by Gabet, which continues the narrative of Huc's letter in vol. xix. down to their exit from Tibet. It is vague and dull, and presents a great contrast to his comrade's vivacity. At p. 223 there is a fuller account by Gabet of their residence at Lhassa. It is curious that it does not contain a word of their swaggering conduct in presence of the mandarins, as described in the *Souvenirs.* Vol. xxi. (1849), and xxii. (1850), contain supplementary

[1] Among many other passages the following is unmistakably in the style of the *Souvenirs*: 'Tolon-noor est comme une monstrueuse pompe pneumatique à faire le vide dans les bourses Mongoles.' It is characteristic, too, of the clever but pretentious abbé that he says the name *Djao-naiman-soumé*, applied to the town of Tolon-noor on the maps (since D'Anville's), is 'également inconnu et incompris des Tatares et des Chinois.' Huc professes familiarity with Mongol, yet he is unable to interpret this name (applied, indeed, not properly to Tolon-noor, but to the site of Kublaï's summer palace at Shangtu, twenty-six miles to the north of it). The words mean simply 'the hundred and eight temples.'

letters or papers by Huc, and this finishes the series. The *Souvenirs* were published in 1851.

Gabet had then apparently already been sent to the Brazils, where he died;[1] and I have no doubt the *Souvenirs* were, as they purport to be, the work of Huc himself, based on the papers by both, of which extracts had been published in the *Annales*. I doubt whether even any extraneous aid of Parisian *littérateurs* was called in; Huc himself was an adept in that vein, as his letters show.

Colonel Prejevalsky several times finds fault with Huc's inaccuracy in details, a subject which will be briefly noticed presently. And in one of the letters which was sent to Russia during his journey, he even seems to imply a doubt of the genuine character of the narrative.[2] Of this he has probably thought better, as the expression of suspicion is not repeated in the present work. Indeed, Colonel Prejevalsky's own plain tale is the best refutation of such suspicions. For it is wonderful, to the extent of the coincidence

[1] Huc's manner of mentioning the fact is vague, and names no date. It is in the Preface to his second work, *The Chinese Empire*, which is itself dated in May 1854.

[2] 'In Koko-nor and Tsaidam the great caravan which Huc professes to have accompanied to Lhassa is perfectly well remembered, and it is somewhat astonishing that nobody has any recollection of the presence of foreigners among its members. Huc further asserts that he passed eight months at Gumbum [*Kounboum* of Huc; properly *Ku-bum*, *v.* p. xxxiv. *infra*]; but I saw many lamas who had resided in that temple for thirty or forty years, and all solemnly assured me that there had never been a foreigner amongst them. On the other hand, in the Ala-shan country, the presence of two Frenchmen at Ninghia twenty-five years ago was distinctly remembered.' (In *Pr. R. G. S.*, xviii. 83.) It is to be recollected that Huc and Gabet were disguised as lamas, and probably their real character was known to few.

And on the other hand, Prejevalsky himself (i. p. 135) mentions having seen, at one of the R. C. missions in Mongolia, Samdadchiemba, the servant of Huc and Gabet, whom their readers remember as well as we remember Sancho or Sam Weller. 'He is of mixed Mongol and Tangutan race. He is fifty-five years of age, and enjoys excellent health; *he related some of his adventures to us*, and described the different places on the road.' Here there is no insinuation that Samdadchiemba's stories were inconsistent with Huc's. Mr. Ney Elias was also acquainted with Samdadchiemba.

of their routes, how the representations of the glib French priest and the Russian soldier agree. Only Prejevalsky's picture of the scene before him is a photograph, careful in accuracy, but not displaying much power of selection as to light or point of view; Huc's is the painting of a clever, perhaps too clever, artist, but still coloured from nature. Artist he is indeed, and as far as may be from science, but, after reading Prejevalsky's narrative, I have felt, more than ever before, the charm of Huc's vivacious touches; more than ever, because the perusal of the Russian work convinced me that his pictures (I do not refer to the braggadocio, probably imaginary, of his conduct before Chinese officials) are true as well as clever. Who that has read the book,—though probably the generations that have risen since 1851, and that have had so much else to read may not have read them,—who can forget that inimitable picture of the yaks of the caravan, after fording the freezing waters of the Pouhain-gol, staggering under the load of icicles that depended from their shaggy flanks?[1] or that other of the wild company of the same species, nipt by the frost in swimming across the head-waters of the mighty Yangtse, and there frozen hard in cold death, the whole hairy herd of them?[2]

[1] 'Les bœufs à longs poils étaient de véritables caricatures; impossible de figurer rien de plus drôle; ils marchaient les jambes écartées, et portaient péniblement un énorme système de stalactites qui leur pendaient sous le ventre jusqu'à terre. Ces pauvres bêtes étaient si informes et tellement recouvertes de glaçons *qu'il semblait qu'on les eût mis confire dans du sucre candi*' (ii. 201).

[2] 'Au moment où nous passâmes le Mouroui Oussou sur la glace, un spectacle assez bizarre s'offrit à nos yeux. Déjà nous avions remarqué de loin, pendant que nous étions au campement, des objets informes et noirâtres, rangés en file en travers de ce grand fleuve. Nous avions beau nous rapprocher de ces ilôts fantastiques, leur forme ne se dessinait pas d'une manière plus nette et plus claire. Ce fut seulement quand nous fûmes tout près, que nous pûmes reconnaître plus de 50 bœufs sauvages incrustés dans la glace. Ils avaient voulu, sans doute, traverser le fleuve à la nage, au moment de la concrétion des eaux, et ils s'étaient trouvés pris par les glaçons, sans avoir la force de s'en débarrasser, et de continuer leur route. Leur belle tête, surmontée de grandes cornes, était encore à découvert; mais le reste

The specific charges which Prejevalsky brings against Huc's narrative are the following:—

1. His description of the ford of the Pouhain-gol, a river flowing into the Koko-nor Lake from the westward, as an extremely difficult passage of a stream broken up into twelve branches; whereas it forms but a single stream where the Lhassa road crosses it, and that only 105 feet wide, with a depth of one or two feet. (See this work, vol. ii. p. 158, and Huc, ii. p. 200.)

2. His entire omission to mention the high chain south of the Koko-nor.

3. His depicting the Tsaidam country as an arid steppe, whereas it is a salt-marsh, covered with high reeds.

4. His omitting to mention the Tsaidam river, though it is twenty-two times as wide as the Pouhain-gol.

5. What he says regarding the gas on the Burkhan Bota mountain 'is very doubtful,' says Col. Prejevalsky.

6. His representing the Shuga chain as very steep, whereas its gradients would, even as they are, bear a railway.

7. The chain of the Baian-kara-ula, 'about which Huc relates marvellous stories,' is only a succession of low elevations, never exceeding 1,000 feet above the plains that lie to the north, and only a little steeper towards the Murui-ussu. 'There is here no pass' (i.e. I presume no *col* to be crossed), 'and the road follows a stream down to the Murui-ussu.'

8. Huc speaks only of *crossing* the Murui-ussu (or Upper Yangtse), after passing the Baian Kara; but the Lhassa road lies along its banks the whole way up to its source in the Tang-la mountains, a distance of some 200 miles.

Now, Nos. 4 and 6 are, as Mr. Ney Elias has already pointed out, mistakes of Col. Prejevalsky's own. Huc *does* mention the Tsaidam river; he does *not* represent

du corps était pris dans la glace, qui était si transparente, qu'on pouvait distinguer facilement la position de ces imprudentes bêtes; on eût dit qu'elles étaient encore à nager. Les aigles, et les corbeaux leur avaient arraché les yeux' (ii. 219).

the Shuga range as very steep: 'Le mont Chuga était peu escarpé du côté que nous gravissions' (ii. 213). The great trouble in passing it was owing to a strong icy wind and deep drifts of snow, in which they had to pitch their tent and dig for *argols*.

As regards No. 7 I can find in Huc no marvellous stories. He speaks, indeed, of the terrors of avalanches, though probably meaning only the perils of snow-drifts. The snow lay very deep when he passed, and it is conceivable, *pace* Col. Prejevalsky, that the course of a ravine may not have been the path adopted under such circumstances.

As regards No. 8 there is nothing I think in Huc absolutely inconsistent with his having followed up the great river after crossing it. But Prejevalsky himself is, according to his countryman Palladius, not quite correct in saying that the road in question follows the river to its source. And moreover there are *three roads* on towards Lhassa from the point where the river is crossed.[1]

In cases 1 and 2 it is probable that Huc was filling up a mere skeleton diary from memory, and the experience of many will recognise that in such a process natural features will sometimes exchange characteristics in the recollection. This has, possibly, been the case with the Pouhain-gol and the Tsaidam river in Huc's narrative; whilst it is by no means made certain that there are not routes, more or less diverse, and parallel to one another, which are adopted according to circumstances.[2] Altogether Col. Prejevalsky's criticisms are a little too much in the vein of Huc's countryman: *'Je ne crois pas aux tigres, moi, parceque je n'en ai pas vu!'*

As for No. 5, 'the gas on the Burkhan Bota,' it is absurd to make even the suggestion of bad faith in regard to this;

[1] I derive these particulars from a Chinese Itinerary published by Father Palladius in Russian, and kindly translated for me by Mr. Morgan.

[2] Huc, after quitting the shores of Koko-nor, travelled for six days to the westward, with very little southing, before reaching the Pouhain-gol. This indicates quite a different part of the river from that crossed by Col. Prejevalsky close to the lake.

it is only an instance of Huc's exceeding ignorance of nature, with all his cleverness. The passage is so curious in this light as to be worth quotation. At the foot of the mountain he says:—

'The whole caravan halted awhile, as if to question its own strength. . . A subtle and light gas was anxiously indicated, which they called *pestilential vapour*, and all the world seemed to be downcast and discouraged. After having taken the prophylactics which tradition enjoins, and which consist in munching two or three cloves of garlick, at last we began to clamber up the flanks of the mountain. Soon the horses refused to carry their riders; we began to go afoot with short steps; insensibly all faces grew pale; the action of the heart was felt to be waning; the legs would no longer do their duty; presently we lay down, got up, and made a few steps in advance, then lay down again; and in this deplorable fashion it was that the famous Burkhan Bota was crossed.'

All this is a vigorous description of the occasional effects of rarefied atmosphere on a person using bodily exertion. The very phrase used, *les vapeurs pestilentielles*, is a translation of the term *Bish ka hawa*, or 'poison-air,' by which the pains of attenuated atmosphere are indicated on the Indian side of the Himalya. Even the cloves of garlick, mentioned by Huc, are the ancient Asiatic antidote used in such circumstances. Benedict Goës, in describing the passage of Pamir, speaks of the custom of using garlick, leeks, and dried fruits as 'an antidote to the cold,' which was so severe that animals could scarcely breathe it. Faiz Bakhsh and the Mirza both mention the use of dried fruits; and Mr. Matthew Arnold refers to a variety of the same, I have no doubt with good authority.[1]

[1] 'But as a troop of pedlars, from Cabool,
Cross underneath the Indian Caucasus,
That vast sky-neighbouring mountain of milk-snow;
Winding so high, that, as they mount, they pass
Long flocks of travelling birds dead on the snow,
Chok'd by the air, and scarce can they themselves

But then Huc goes on to talk foolishness about 'the carbonic acid gas which we know is heavier than atmospheric air'—and so forth, and to tell how this carbonic acid gas caused a difficulty about lighting a fire. Marco Polo mentions the latter fact, but, belonging to the pre-scientific age, he attributes it to the great cold.[1]

In a Chinese Itinerary through Tangut and Tibet, already cited, I find a perfect explanation of Huc's strange talk. At a great many stations on both sides of the Murui-ussu (or Upper Yangtse), it is noted that there are 'noxious vapours' at the camping-ground; so no doubt Huc merely accepted and embellished the phrase of his travelling companions.

A more amusing illustration of this notion is given in Dr. Bellew's recent book, 'Kashmir and Kashgar,' where an Afghan follower, to whom he had given chlorate of potash, says: 'Yes! I'll take this, and please God it will

> Slake their parch'd throats with sugar'd mulberries—
> In single file they move.' . . .
>
> *Sohrab and Rustum.*

The authority for the 'sugar'd mulberries' is, as Mr. Arnold himself has kindly informed me, Alex. Burnes. It is a pity that this vivid and accurate picture is a little marred to an Anglo-Indian ear by the misplaced accent of Kābŭl (as it ought to be). It was told characteristically of the late Lord Ellenborough that, after his arrival in India, though for months he heard the name correctly spoken by his councillors and his staff, he persisted in calling it *Cābōol* till he met Dost Mahommed Khan. After the interview the Governor-General announced as a new discovery, from the Amir's pronunciation, that *Cābŭl* was the correct form.

[1] Another medieval antidote to the effects of attenuated atmosphere at great heights seems to have been the application of a wet sponge to the mouth. It is mentioned by Sir John Maundevile in speaking of Mount Athos; and by a contemporary of his, John de' Marignolli, in reference to a lofty mountain in 'Saba,' probably Java. His accuracy of expression is remarkable: 'From the middle of the mountain upwards the air is said to be so thin and pure that none, or at least very few, have been able to ascend it, and that only by keeping a sponge filled with water over the mouth.' Drs. Henderson and Bellew, in crossing the high plateau to Kashgar, found chlorate of potash to be of great value in mitigating the symptoms of distress.

cure me. But this *dam* is a poisonous air, and rises out of the ground everywhere. If you walk ten paces it makes you sick, and if you picket your horse on it, it spurts from the hole you drive your peg into, and knocks you senseless at his heels.'

Huc, whatever his cleverness as a painter of striking scenes, was not only without science, but without that geographical sense which sometimes enables a traveller to bring back valuable contributions to geographical knowledge, even when without the means of making instrumental observations.

A succession of political events during the last twenty years has greatly changed the state of things in Upper Asia, and has tended to the rapid widening of geographical knowledge. The chief of these events have been the revolt of the Mahommedan subjects of China in Eastern Turkestan and Dzungaria, followed by the advance of Russian authority into the basin of Ili, and by our own communications with the new authorities in the Kashgar Basin; the results of war with China in the establishment of Europeans at Peking, and the gradual abatement of the barriers that excluded them from the exploration of the interior provinces of China Proper; and, lastly, the rapid spread of Russian power over Western Turkestan.

The journey of the unfortunate Adolphus Schlagintweit to Kashgar, where he was barbarously murdered in 1857, was the first achieved from the Indian side.

In the last twelve years Col. Montgomerie has been indefatigable in his organisation of expeditions into the Unknown region by trained *Pundits*. First Yarkand was reached; then Lhassa; and a variety of other geographic raids were made upon Tibetan territory by this kind of scientific light-horse. But much as they have done to fill up blanks upon our maps, and to amend their accuracy, it is impossible for us to regard these vicarious achievements with the same satisfaction that we derive from geography conquered by the daring and toil of Euro-

pean travellers of the old stamp. These, however, have not been lacking either on the Russian side or on our own, nor, as we shall see, have France and Germany failed to contribute to the series of modern explorations in High Asia. Shaw and Hayward and Johnson were the pioneers of British exploration in Eastern Turkestan; and these have been followed by the less perilous journeys of Sir D. Forsyth and his companions, by the ride of the latter across Pamir, and by their success in connecting, at least by preliminary survey, our own scientific frontier with that of Russia. Cooper's two daring attempts to traverse the formidable barriers which man, even more than nature, has set between India and China, are hardly within the field that we are contemplating

Since 1865–66 Armand David, like Huc and Gabet a Lazarist priest, but very unlike them in his zeal for natural science, has made a variety of adventurous journeys within the eastern borders of this little-known region. On one of these expeditions (*1866*) he devoted ten months to the study of the natural history of the Mongolian plateau in the vicinity and to the westward of Kwei-hwa-cheng or Kuku Khoto. In 1868 he visited the province of Szechwan, and advanced into the independent and hitherto entirely unknown Tibetan highlands on its NW. frontier, and thence into the eastern part of the Koko-nor territory. On this and previous journeys he claims to have discovered *forty* new species of mammals, and more than fifty of birds. Among the former are two new monkeys, living in very cold forest regions of the hill country just mentioned, and a new white bear. There has as yet been no publication *in extenso* of the journeys of this ardent and meritorious traveller.

Baron Richthofen, whose explorations of China have been at once the most extensive and the most scientific of our age, has traversed only a small part of the Mongolian plateau; but from his remarkable power of apprehending, and of indicating in a few words, the most characteristic features of structure and geography, he has

thrown more light on the physical character of the region, so far as he saw it, than any other traveller.

Our countryman, Mr. Ney Elias, who has shown a remarkable combination of a traveller's best gifts with singular modesty in their display, has carried a new line of observations along the vast diagonal of Mongolia from the Gate at Kalgan to the Russian frontier on the Altai, through Uliassutai and Kobdo, a distance of upwards of 2,000 miles. To him these remarks are often indebted.

Dr. Bushell and Mr. Grosvenor have also passed the Wall at Kalgan to visit Dolon-nor, and Shangtu, the desolate site of the summer-palace of the great Kublaï.

We cannot attempt to recall even the chief names in the history of exploration from the Russian side, though I should be loath to leave unspecified the successful journey of that accomplished couple, Alexis and Olga Fedchenko, to the Alai Steppe, which is in fact a northern analogue of Pamir, separated from the southern plateaux, so called, by the mighty chain to which Fedchenko gave the name of Trans-Alai, the Kizil-yurt of our own Anglo-Indian travellers. But of all modern Russian incursions on the tracts that we have designated as the Unknown, Lieut.-Col. Prejevalsky's has been the boldest, the most persevering, and the most extensive.

The scene of his explorations was that plateau of Mongolia of which we have so often spoken, and that region which rises so far above it, the terraced plains, and lofty deserts of Northern Tibet, which spread out at a level equal to that of the highest summits of the Bernese Oberland, whilst the ranges which buttress the steps of the ascent rise considerably higher.

Captain (now Lieut.-Col.) Prejevalsky was already known as an able explorer, when, in 1870, he was deputed by the Imperial Geographical Society of St. Petersburg, under the sanction of the War Department, to conduct an exploration into Southern Mongolia. With his companion he left Kiakhta on November 29, 1870, for Peking, where they remained till the spring.

The time was unfavourable for such a journey as was proposed; for the Mahommedan rebellion in NW. China and the adjoining regions was in full blaze. Singanfu, the capital of Shensi, and famous capital of China in ancient times, had in the spring of 1870 been invested, and an invasion of Shansi, perhaps of Pechihli itself, had only just been barred by a timely check of the rebels at Tung-kwan, on the great south-west elbow of the Yellow River, a point often, and in all ages of Chinese history, the key of important campaigns. About midsummer the strong frontier town of Kuku Khoto (or Kwei-hwa-cheng), in the border-land north of the Great Wall, was entirely blockaded from the side of Mongolia, whilst raids were frequently made into its suburbs. In October Uliassutai had been attacked, and the open part of the town burnt, and so greatly were the Chinese alarmed for Urga itself that they allowed it to be protected by a Russian garrison.

Prejevalsky himself does not (in this work at least) state these sufficient reasons for delaying his expedition; he rather seems to leave us to infer that the delay was part of the programme; but we borrow the details from a notice by Mr. Ney Elias, who was himself in North China and cognisant of the circumstances.[1]

It was impracticable, however, in such a state of things to carry out the journey projected, and in the meantime Colonel Prejevalsky determined on undertaking a preliminary and experimental journey to the busy town of Dolon-nor and the salt lake of Dalai-nor in Eastern Mongolia. Returning to Kalgan, he reorganised his little caravan, and on May 15 again ascended the Mongol table-land, and travelled westward parallel to its southern margin, and through the Tumet country,[2] till they struck the western

[1] *Pro. R. Geog. Soc.*, vol. xviii. p. 76.

[2] Regarding this country of the Tumet, Mr. Ney Elias affords an interesting anecdote:—'While at Tientsin last spring, one J—— G——, a tide-waiter in the Customs service, and formerly a sailor, told me that every winter, when the river was closed by ice, he was in the habit of going on a shooting excursion into Mongolia, beyond the Kou-pe-Ko pass, "but last winter," he coolly added, "I went to

extremity of the Inshan mountains on the northern bank of the Hoang-ho. Thence they descended to Bautu, on the left bank of the river, and crossed into the dreary plains of the Ordos.

Their course lay now for nearly 300 miles westward, and parallel to the southern bank of the river, where it forms that great northern bend, familiar to all who have been in the habit of consulting maps of China. In all our maps the river is here represented as forming a variety of branches, but the main stream as constituting the most northerly of these. This bed still remains, but the river now flows in the most southerly of the channels, some thirty or forty miles farther south than it did in former times.

At the town of Ding-hu (called on former maps by the Mongol name Chaghan-subar-khan), the travellers crossed to the left bank of the Yellow River, and here they were in the province of Ala-shan, of which we have from Prejevalsky for the first time some distinct account. It forms a part of

TIBET." This assertion somewhat surprised me, and led to a cross-examination, by means of which I elicited, among other matters relating to his excursion, the following:—He had passed the Great Wall at Kalgan, and had ridden a seven or eight days' journey towards the west, when he arrived in a mountainous country, where there were yaks. He had "read in books" that yaks were found in Tibet. The natives called the country *Tibet*, and so did his Chinese coxswain, who accompanied him. The people were "something like the Mongols," but spoke differently. Thinking he was mixing up his reading and experience for my special benefit and instruction, I left him, and thought no more of his story until some two months afterwards, at Kwei-hwa-cheng, I remarked that the Chinese pronounced the name of the Mongol tribe in that district *Tümet* or *Timet*, instead of *Toumet*, and the truth of G——'s story at once flashed across my mind . . . and that he saw yaks there I have not the slightest doubt, for I have seen them in the same neighbourhood . . . . though of course not indigenous, as he apparently supposed.

'Having read of *Tibet*, and never having either read or heard of the *Toumet* Mongols, he easily picked up the Chinese pronunciation of the latter, and confusing the *m* and the *b*, told a story that would have earned for a preaching friar of the fourteenth century some very hard names.'—(*Letter dated Sept.* 29, 1873.)

Marco Polo's *Tangut*, and probably a part, at least, of Ala-shan is identical with his district of *Egrigaia*, of which the chief town was called *Calashan.*

Twelve days' journey to the south-east brought the party to Din-yuan-ing (Wei-ching-pu of maps), the present capital of the principality, where they were well received by the Prince and his family, who has a deep impression of the greatness of the White Khan, i.e. of the Czar. This reception Col. Prejevalsky notes as the only hospitable welcome that they had met with; and he hardly records any recurrence of the like.

From this place they made an excursion into the mountainous region of Ala-shan, which rises boldly from the valley of the Hoang-ho; its highest summit, which they visited, reaching to 10,650 feet above the sea.

These wooded mountains afforded the traveller ample booty in his especial pursuit as a sportsman and zoologist. On returning from their excursion to the capital of Ala-shan, they found their means all but exhausted, and were compelled reluctantly to turn their faces Peking-wards; on this journey keeping entirely to the left bank of the river, and of its old deserted bed, and following in great part, I have no doubt, the route of Marco Polo on his first approach to the Court of the Great Khan.

Prejevalsky, benefiting by the experience acquired on these journeys, employed himself for two months in preparing for a third expedition; and himself acquiring at the same time, by practice at the Russian Observatory, some acquaintance with practical astronomy. A third start from Kalgan was made in March 1872.

They reached Din-yuan-ing on May 26, and some days later having joined a Chinese caravan travelled with it through Kansuh to the Lama monastery of Chobsen, about forty miles north of Sining-fu, a month's journey in all. From this point the Russians diverged to the mountains bordering on the Tatung river for the sake of collections in natural history; and these were very abundant, affording 46 new species of birds, 10 species of mammalia, and 431

plants. They also investigated *de visu*, for the first time it is believed in modern days, the famous rhubarb plant in its native region. With a view to its cultivation in Russian territory, a quantity of seed was collected.

The traveller had, even at this point, become sensible that his means were inadequate to carry the party to Lhassa, and had, with a sore heart, to accept the inevitable. But he determined not the less to explore the basin of the great lake Koko-nor, and the Tsaidam region to the SW. of it.

At this time Sining-fu, Tatung, and Suhchau were in the hands of the Tungani or Chinese Mahommedan insurgents. Kanchau and Lanchau, with several other cities, were held by the Imperialists. The whole country between the two parties was continually scoured by bands of free-booters, who carried on their devastations beneath the very noses of the Chinese troops.

The fame of the rifles and skill of the Russians kept the Tungani from all attempts to meddle with them; and on September 23 they left Chobsen for the Koko-nor, passing right across the country haunted by the rebels. On the march they came on a large body of Tungani, but by putting a bold face on the encounter the little body of Russians utterly discomfited the robbers, who turned tail and fled ignominiously. At last on October 14, they arrived in the basin of the Koko-nor, and pitched their tents on its shores, at some 10,000 feet above the sea. The steppe here is fertile and well peopled with both men and cattle. The people are both Mongol and *Tangutans*, respecting whom a few words will be found in the Supplementary Notes to Volume II.

After purchasing some camels there remained but some forty pounds in pocket. But sure of maintenance from their guns, Prejevalsky resolved to push on.

A high range of mountains was crossed in quitting the basin of the lake; and the travellers then entered the region of Tsaidam, which he describes as a vast salt-marsh, covered with reeds, as if recently the bed of a great lake.

This marshy hollow is said by the Chinese to stretch W. and N. to Lake Lob. Here a sore temptation presented itself to Prejevalsky, as at once traveller, zoologist, and sportsman, to diverge to the westward for a new species of game,—the WILD CAMEL.

This is a somewhat interesting subject; for disbelief in the existence of the Wild Camel has been strongly expressed, —and indeed not long since by one of the greatest of scholars as well as geographical authorities on Central Asia. It is worth while, therefore, to observe that its existence by no means rests on the rumour heard by Prejevalsky. There is much other evidence; none of it, perhaps, very strong taken alone, but altogether forming a body of testimony which I have long regarded, even without recent additions, as irresistible.

The following are the testimonies of which I have retained memoranda, but I believe there are several others in existence:—

I. Shah Ruḳh's ambassadors to China (A.D. 1420) midway in the Great Desert between Kamul and Shachau, or thereabouts, fell in with a wild camel.[1]—II. The Persian geography called *Haft Iḳlím* ('The Seven Climates'), probably quoting from Haidar Rázi, says of the Desert of Lob: 'This Desert contains wild camels, which are hunted.'[2]—III. In Duhalde we find the following from Chinese sources: 'Both wild and tame camels are found in the countries bordering on the north of China . . . at present wild camels are only to be met with in the countries north-west of China.'[3]—IV. In the Journal of the 'As. Soc. of Bengal,' ix. 623, I see that Sir Proby Cautley quotes Pallas as arguing, on Tartar evidence, that the wild camel is found in Central Asia. Cuvier ascribes this to the Buddhist custom of giving liberty to domestic animals. This may have been the *origin* of the breed, as of the wild horses of S. America and Queensland. But we see above

[1] See *Cathay and the Way Thither*, i. cc.
[2] *Notices et Extraits*, &c., xiv. pt. i. 474.
[3] English folio ed. ii. 225.

that they have been known for at least 450 years.—V. 'Izzat Ullah, who travelled as a 'Pundit' in the employment of Moorcroft, mentions that Khotan is said to abound in wild asses, *wild camels*, cattle, and musk-deer.[1] —VI. Mr. R. Shaw, in his 'High Tartary': 'The Yoozbashee says they (lyre-horned antelopes), go in large herds, as do also *wild camels* (?) in the great desert eastward' (p. 168).—VII. Sir Douglas Forsyth, in a letter which he wrote to me from Shahidullah, on his last mission to Kashgar, mentioned that the officer who met them there had shot the wild camel in the Desert of Turfàn. It was a good deal smaller than the tame camel.—VIII. The same gentleman in the printed report of his mission gives more detailed evidence, apparently from another native informant, which I quote below.[2] IX. Mr. Ney Elias also received strong and repeated evidence of the existence of wild camels north of the Thian Shan 'from intelligent Chinese travellers, as well as from the native Mongols . . . Many of the former, who declared they had seen these animals between Kobdo and Ili, Uliassutai and Kuchen, I questioned as to their being really wild, or having become so subsequent to domestication; but the answers were always emphatically that they had never been tame . . . . Moreover, the wild camels were always

[1] *J. R. As. Soc.*, vii. 319.

[2] 'The wild animals of Lob are the wild camel. . . . I have seen one which was killed. . . . It is a small animal, not much bigger than a horse, and has two humps. It is not like a tame camel; its limbs are very thin, and it is altogether slim built. I have seen them in the desert together with herds of wild horses. They are not timid, and do not run away at the sight of a man. They do nothing unless attacked; they then run away, or else they turn and attack the huntsman; they are very fierce, and swift in their action as an arrow shot from the bow; they kill by biting and trampling under foot, and they kick too like a cow. They are hunted for the sake of their wool, which is very highly prized, and sold to the Turfàn merchants.'—*Rep. on Mission to Yarkand in* 1873, p. 53.

The word applied to the wild horse mentioned here is *Kulan*, which is the Turki name of the Tibetan *Kyang*, more properly a species of wild ass. This *équivoque* is probably at the bottom of the many mentions of wild horses; but I would not say so positively.

described to me as smaller in size and much darker in colour than tame ones,'[1]—X. Dr. Bellew says: 'The deserts on the east of this territory, in the vicinity of Lob . . . . are the home of the wild camel. It is still, as of old, hunted there, and is described as a very vicious and fleet animal, and of small size, not much larger than a large horse. A Kirghiz shepherd, who had resided for some years at Lob, told me that he had frequently seen them at graze, and had himself joined in many hunting expeditions against them for the sake of their wool, which is very highly prized for the manufacture of a superior kind of camlet.'[2]—XI. The Russian Father Hyacinthe, in his memoirs on Mongolia, speaking of Middle Mongolia, says that there are found *wild camels*, wild mules, wild asses, wild horses, and wild goats, especially on the more westerly steppes.[3]—XII. Captain Valikhanoff says that Chinese works *very often* speak of wild camel hunts, which formed one of the amusements of the rulers of the cities of Eastern Turkestan in past ages, though he could not get information regarding the animals.[4]—XIII. Several additional testimonies will be found cited by Ritter (iii. 341, 342).[5]

We have indulged in that digression after wild camels, which Prejevalsky denied himself. He passed on into the lofty and uninhabited desert of Northern Tibet, which extends for a width in latitude of some 500 miles, at an altitude of 14,000 to 15,000 feet above the sea, and reached

[1] *Proc. R. Geog. Soc.*, xviii. 80.

[2] *Kashmir and Kashgar*, p. 348.

[3] *Denkwürdigkeiten über die Mongolei*, p. 110.

[4] *Russians in Central Asia*, p. 141.

[5] *Ritter* (ii. 241), speaking of the ancient Turks of the Gobi, says:—'Their prisoners of war were compelled, like the Roman prisoners among the Germans, to act as their herdsmen. Sheep, oxen, asses, horses, and camels constituted their wealth. These last have also existed in those tracts *from the most ancient times in a wild state*, so that we must believe this to be their natural *habitat*, and in all probability they were first tamed by the Turk nomads.' I cannot find that Ritter has authority for the words which I have italicised; perhaps they only represent his own impression.

the upper stream of the Great Yangtse, known there to the Mongols as the Murui-ussu or Winding Water. In this region, uninhabited by man, wild animals abound; wolves, argali or wild sheep, antelopes of various sorts, and above all the wild yak, are found in vast numbers. These last our traveller estimates to exist in millions; strange, if it be true, that such a vast amount of flesh can derive nourishment and growth from those bleak and scanty pastures. For the individual animal also is of enormous bulk, an old male reaching to a weight of 1,600 lbs., measuring six feet to the hump, and eleven feet in length without the tail.

Their guns thus provided them with animal food in abundance, supplemented only with barley-meal and brick-tea. But their camels were utterly worn out and their funds exhausted, and thus within less than a month's journey of Lhassa they were compelled, with bitter regret, to turn their backs on that almost unvisited city. And the same causes compelled the travellers to leave unattempted an expedition to the mysterious Lob-nor, though the way was open, and a guide procurable.[1]

Retracing their steps over the plains of Tsaidam and the Koko-nor, they again devoted some weeks of spring to extending their zoological collections in the moist region of the Kansuh mountains; and then, after much toil and suffering in crossing the desert tract of Ala-shan, they again reached Din-yuan-ing, where their pockets, not too soon, were replenished by a remittance from General Vlangali, at Peking. So worn and ragged were they, that as they entered the town the Mongols bestowed on them what Prejevalsky evidently regards as one of the most opprobrious of epithets; they called them 'the very image of Mongols'!

Whilst sending out their camels for three weeks' grazing, they renewed their zoological explorations of the

[1] The true position of this lake, as well as its character, is very doubtful. See remarks in *Marco Polo* (2nd ed. i. 204), and by Mr. Ney Elias in the *Proc. R. Geog. Soc.* xviii. 83.

adjoining mountain region; and then started on a journey never before attempted by any European, the direct route from Ala-shan across the Gobi to Urga.

This arduous journey had to be accomplished in the height of summer, and occupied from July 26 to September 17. 'This desert,' the author says, speaking of the depressed basin on their route called the Galpin Gobi (3,200 feet), 'is so terrible that in comparison with it the deserts of Northern Tibet may be called fruitful. There, at all events, you may often find water and good pasture-land in the valleys; here there is neither the one nor the other, not even a single oasis; everywhere the silence of the Valley of Death.' Finally, after a week's repose at Urga, the travellers re-entered their country's frontier at Kiakhta, on October 1, 1873.

Their toil had extended over three years, during which they had travelled upwards of 7,000 miles, of which they had laid down about half in routes surveyed for the first time, and accompanied by very numerous observations for altitude by the aneroid first, and afterwards by boiling point. The route surveys were checked by eighteen determinations of latitude; and a meteorological record was kept throughout the journey. The plants collected amounted to 5,000 specimens, representing upwards of 500 species, of which a fifth are new. But especially important was the booty in zoology, which is Prejevalsky's own specialty, for this included 37 large and 90 smaller mammals, 1,000 specimens of birds, embracing 300 species, 80 specimens of reptiles and fish, and 3,500 of insects. The journey and its acquisitions form a remarkable example of resolution and persistence amid long-continued toil, hardship, and difficulty of every kind, of which Russia may well be proud.

A defect in the constitution of the expedition which forces itself on the observation of a reader was evidently the want, not only of any sufficient knowledge of the languages in use, but of any competent interpreter,—indeed, on a large part of the journey,[1] it would seem, of anyone

[1] See vol. ii. p. 111.

whatever worthy to be called an interpreter,—combined, as Mr. Elias has remarked, with a 'general inexperience of Chinese human nature.' The traveller himself is inclined to indulge somewhat strongly in contemptuous and inimical judgments of the people among whom he found himself; but this very contempt and hostility, with its sure reaction in ill-will from the other side, was certain to be aggravated by the difficulties of communication. The absence also, of a good interpreter renders it necessary to reject or doubt a good many of Col. Prejevalsky's interpretations of names.

Before closing these remarks it may be well to notice one or two points on which comment may be made more conveniently here than in the Notes appended to these two volumes.

One of the most novel and remarkable circumstances that come out in this narrative is the existence of an intensely moist mountain region in Kansu, to the north of the Hoang-ho, and on the immediate east of Koko-nor. This tract[1] constitutes there what Prejevalsky calls the 'marginal range,' a feature everywhere characteristic of the plateau of Mongolia, i.e. a belt of mountain following and forming the rim of the plateau and the descent from it, but also rising considerably above the level of the plateau itself. In this range, after a short and easy ascent from the side of the table-land, at a distance of only twenty-seven miles from the arid desert of Ala-shan, the travellers found themselves on a fertile soil, abounding in water, where rich grass clothed the valleys, dense forests darkened the steep slopes of the mountains, and animal life appeared in great abundance and variety.[2] The rains, during their stay of some weeks in these mountains, in June and July, were incessant, and the humidity in their tents excessive. The facts are not very clearly brought out in the narrative, and the scientific records of the journey have not yet

[1] See vol. ii. ch. iii.

[2] Here Col. Prejevalsky was able to study the real rhubarb plant on its native soil,—the first European who had seen it there, I believe, since Marco Polo.

been published. But we are told (ii. 102) that the most southerly chain of these mountains, viz. that which rises directly from the plain of Sining-fu, is without forest, at least on its southern slopes, and its alpine zone almost without a flora,—expressions which seem to indicate the humid and fertile mountain region as isolated between two arid tracts. Our information as to the mountain regions still further south is very scanty indeed; but the brief account of Père Armand David's visit to the highlands on the south-east of the Koko-nor region, and nearly in the same meridian as that of which we have been speaking, describes a similar, but even moister climate. 'The atmosphere was so charged with moisture that it sufficed to precipitate this in rain, if several men joined in making a loud noise and firing off their guns.'[1] The mountains were perpetually clothed in mist, which favoured the growth of conifers and rhododendrons; of the last no less than sixteen species were collected. Further south, again, on the same meridian, we have Mr. Cooper's account of his journey from Ching-tu-fu into Eastern Tibet; and here also we have a picture of heavy rains between July and September (see pp. 219, 367, 395). We are here approaching the Irawadi valley and the mountains that bound Bengal on the east, where the summer rain is so heavy and regular. So that these Kansuh Alps, with their heavy rains and abundant vegetation, seem to fall within the north-western limit of a vast area over which the heavy summer rains, which in India accompany what we call the south-west monsoon, are the rule, presenting so strong a contrast to the dry summers and wet winters of the sub-tropical zone of Europe.'[2]

Another subject which seems to require notice here consists of those characteristics of Tibetan Buddhism to which allusions frequently occur in Prejevalsky's narrative,

[1] *Bull. de la Soc. Géog.* for 1871, pt. i., p. 465.

[2] Indeed, it would seem, of the western shores of both continents. The area affected by these summer monsoons, or sea-winds precipitating moisture, appears to embrace Manchuria, the coast of the Gulf of Okhotsk, and the Amur region up to the Baikal. (See Dr. Wojeikoff, in *Petermann's Mittheilungen* for 1870.)

especially that of the so-called 'incarnate Buddhas.' Prejevalsky's allusions to the subject are somewhat crude and loose, insomuch that, hard matter as it is to grasp, and especially to put briefly, I must make the attempt, by aid of Koeppen's admirable book.

'Lamaism,' says Koeppen, 'is the *Romanism* of the Buddhist Church. The thorough-going development of the priestly power, both in itself and in its relations towards the laity, and, closely bound up with that, the erection of an outward, visible, and sovereign Church and ecclesiastical State, exercising rule over people and provinces;—these form the essential character by which Romanism is distinguished from the older Christianity, and by which Lamaism is distinguished from the old Buddhism of India. Wherever these have in other respects departed from the earlier forms, whether in religious practice, in discipline, or in worship, these departures have been, in the one case as in the other, but as means to an end.'

The similarities between Lamaism and Roman Catholicism, moreover, extend so far beyond general characteristics of this kind, run into so many particulars, are often so striking, and sometimes so grotesque, that they have been contemplated with some dismay and perplexity by zealous missionaries of the Roman Church, from the Middle Ages downwards to our own. Indeed, it has been alleged,—but, be it said, it is an allegation which I have endeavoured to verify without success,—that Père Huc himself, who had noted some of the superficial resemblances with his usual neatness of expression, was, on his return to Europe, astonished to find his book in consequence registered in the *Index Prohibitorum* of an ungrateful Congregation.

The details of resemblance between those peculiarities of Roman Catholicism which seem to persons outside of its pale to have so little in common with the spirit of the New Testament, and the peculiarities of this other system, which, perhaps under analogous influences,

has deviated so far from the original form of Sâkya's doctrine, would be worthy of more careful study than they have yet received. And this study might, possibly, suggest wholesome considerations to some well-meaning persons among our countrymen just now.

In its older forms Lamaism was a kind of Buddhism corrupted, on the one hand by the aboriginal Shamanism, and on the other hand by Sivaite magic and mysticism. It also allowed, at least in certain cases, of the marriage of priests, under varying conditions and limitations, kindred to those which strictly belonged to the character of the pure Brahman. Thus, certain of the hierarchy were allowed to live in the married state until an heir was born; others until the son also had an heir. And the sacred dignities were thus often hereditary in the literal sense.

In the middle of the fourteenth century arose the great reformer of Lamaism in the person of Tsongkaba, born in the province of Amdo, at the spot now marked with consequent sanctity by the great monastery of Kunbum.[1] Tsongkaba was a reformer, manifestly, not in the spirit of Luther or Calvin, but rather in that of Francis or Dominic; but we are not in a position to indicate very clearly the scope of his reforms. He did, however, evidently make some considerable effort to revert to the original practices of Buddhism. And the most visible and external of his reforms, the substitution of the yellow cap and robe for the red which had characterized the older Lamas, was an instance of this. Such also was the more important measure of recalling the priesthood to a strict and universal profession of celibacy. The old Indian Buddhism did recognise wedded persons under certain secondary vows as lay brothers and lay sisters, but knew no such persons as married *sramanas*, or full members of the Church. Tsongkaba also greatly checked, or strove to check, the intervention of magical practices among the faithful. These were excessively prevalent among the older Lamas,—as,

[1] s*Ku-bum* (pronounced *Ku-bum*, or *Kun-bum*), 'the 100,000 images,' some thirty or forty miles south of Sining.

indeed, we may see from Marco Polo's repeated allusions to the diabolical arts of the sorcerer *Bakshis* of *Tebet* and *Kèshemur*. The reform did not, apparently, prohibit *all* magic, but only its grosser arts, distinguishing, as Koeppen felicitously expresses it, between white magic and black; forbidding necromantic incantations, with regular sorcery and witch-broth-cookery, as well as vulgar tricks like fire-breathing, knife-swallowing, and the pretended amputation of the limbs,—or even the head,—of the performer by his own hand. These were all pet practices of the old red unreformed Lamas, and still remain so. Tsongkaba's reform had great swing, and has long been predominant in numbers and power.

He was, of course, canonized among his followers, and is generally regarded as having been an incarnation of the Dhyâni Buddha[1] of the present world-period, Amitâbha, though sometimes also of the Bodhisatvas,—or Buddhas designate,—Manjusri and Vajrapâni. His image is found in all the temples of his Yellow Church, often between those of its two Pontiffs, the Dalai Lama of Lhassa, and the Lama Panchhan Rinbochhi of Tashilunpo.

The reforms of Tsongkaba led to, or at least culminated in, a new development of Lama doctrine and order; from one point of view, in the establishment of a regular papacy,—though dual or bicephalous; from another point of view, in that of a peculiar system of succession such as has, probably, no parallel on earth.

Thus there exist since his time two chief prelates and pontiffs of the Yellow Church, exercising both spiritual and temporal power,—two popes, in fact, each within his own dominion; the one at Lhassa, the *Dalai* Lama, as he is best

[1] The Dhyâni Buddhas (or Buddhas of contemplation) belong to the complex subtleties of northern Buddhism. The human Buddha performing his work upon the earth has a celestial reflexion, or representative, in the world of forms, who is a *Dhyâni* Buddha. A *Bodhisatva* is one who has fulfilled all the conditions necessary to the attainment of Buddahood (and its consequent Nirvâna), but from charity continues voluntarily subject to reincorporation for the benefit of mankind.

known to us, by a Mongol term, signifying 'The Ocean;' the other at Tashilunpo ('The Hill of Grace') or Digarchi, styled in Tibetan the Panchhan Rinbochhi, or 'Most Excellent Jewel.' In rank, sanctity, and spiritual dignity these may be regarded as equal; but in extent of temporal dominion the Lhassa Pontiff vastly surpasses his colleague.

These two Princes of the Church are in a manner indefeasible. Whenever one or other shuffles off this mortal coil he proceeds to resume it again under the form of a child born to succeed to the dignity, and indicated by miraculous signs as the reincarnation of the departed Pontiff. This is the system of supernatural succession of those reborn saints whom the Mongols term *Khubilghân.*

The history of its institution is buried in obscurity; but the old Red-cap hierarchy, at least in some of its sects, had established the hereditary character of the higher ecclesiastical dignities. To preserve this was impossible under the celibate enforced by Tsongkaba; and the system of succession by pretended reincarnation may have been a scheme artfully devised to preserve union among the Yellow sect, who might easily have been split by the discords and intrigues of an elective papacy, as those causes again and again split the Catholic world, until it came under the compressive force exercised upon it by the existence of seceding Churches. However that may be, it came to pass, sooner or later, that not only those two chief pontiffs, but also the secondary and tertiary dignitaries of the hierarchy came to hand on their succession in the same supernatural manner.

The transmigration of souls, or what is most simply described by that expression, is well known to be a prominent doctrine of all Buddhism. Among the northern Buddhists also, after many centuries, had arisen a doctrine (derived probably from the Hindu Avatâras) which represented the Bodhisatvas (i.e. potential or designate Buddhas, awaiting in a celestial repose the time of their accomplished Buddhahood) as occasionally and voluntarily assuming human form. Thence by a third step Lamaism evolved its

climax in this doctrine of *continuous* incarnations, maintaining the succession to high spiritual dignity on earth.

The *Buddhas* of the past,—those culminations of spiritual progress who have attained and accomplished their day in that supreme position, vanish in Nirvâna and return no more. But the Bodhisatvas, for the weal of mankind, become thus repeatedly embodied on earth. This voluntary incarnation is a different thing from the ordinary re-birth of metempsychosis. The latter is a fate incumbent on every living soul till it be freed from all impurity. But voluntary incarnation is the peculiar privilege of those sin-free souls alone which have wrought their way out of the toils of transmigration. Transmigration, in short, from a Buddhist point of view, is a *natural*, whilst reincarnation is a *supernatural* process.

This doctrine, no doubt, had early seeds, but it expanded to its full development only in the fifteenth century, and in the Yellow Church of Tsongkaba.

The Dalai Lama of Lhassa is always looked on as the incarnation of the Bodhisatva Avalokiteçvara, the special guardian of Tibet. The Panchhan Rinbochhi is regarded immediately as the re-born Tsongkaba, but therefore ultimately as the Dhyâni Buddha Amitâbha. So that, as regards the spiritual rank and doctrinal authority that he represents, the latter would, perhaps, stand highest; but he of Lhassa preponderates in temporal dominion, and consequently in ecclesiastical influence.

It is very obscure how this double popedom arose; but the most probable deduction from the fragmentary facts accessible is that the Lhassa pontificate is somewhat the oldest, going back to very near the age of Tsongkaba, and that the Panchhan Rinbochhi dates from the foundation of the great monastery of Tashilunpo, *circâ* 1445-47. We know that in 1470 both existed, for both in that year received seals and diplomas from the Chinese Emperor.

For a considerable time the two were only the archpriests of the Yellow sect, and were so regarded by the chiefs of the Reds, who held an analogous position. But

since the invasion of Tibet in 1643, by the Mongol Gushi Khan, who depressed the Reds, and established the Dalai Lama as temporal sovereign of the greater part of Tibet, no such equality exists. The chief prelates of the Red sects in Tibet Proper, in Bhotan, and in Ladak, have now long been in a kind of dependence on the Yellow papacy, and are, both in Lhassa and in Peking, counted among the *Khutukhtus* or *Monsignori* of the Lamaitic hierarchy. I have no doubt that Rome, so fertile in analogies with Lamaism, could furnish a perfect parallel; but the nearest that occurs to my scanty knowledge is the position of the priests of the Greek rite in Sicily, or that which a high Catholic prelate was recently alleged to have desired to recognise in certain would-be deserters of the Church of England.

The *Khutukhtus*,—Monsignori, as I have just called them, or perhaps *Cardinals*, as Père Huc himself calls them,—form the second order in the hierarchy, and in Tibet Proper, like the Roman cardinals up to 1870, they hold the civil administration of the provinces in their hands. They also are counted among reincarnate saints. The best known of them is that patriarch of Mongolia who, since 1604, dwells at Urga, the most powerful and revered of all the Lama hierarchy after the Two Jewels of Central Tibet.[1] Next to him is the second Mongolian patriarch, dwelling at Kuku Khoto; whilst a third represents Lamaism at the Court of Peking.

After these come the commoner herd of re-incarnates, who are numerous, insomuch that a great many monasteries in Mongolia and Tibet have an incarnate saint, or 'Living Buddha,' as they are sometimes called by travellers, for their abbot. These are the *Chaberons* of Huc; the *Gigens* of Prejevalsky. And the Red-caps themselves, who in former times admitted of succession by natural descent, have now adopted this supernatural system.[2]

[1] See Prejevalsky, i. pp. 11-13. This is the personage whom Huc calls *Guison Tamba*.

[2] P. Armand David tells a curious story of the 'living Buddha' of

Till the end of last century the designation of the successor to all posts in the hierarchy, by this alleged reincarnation, lay in the hands of the ecclesiastics, who pulled the wires, however varied the manner in which the play of identification was played. But for many years past the Court of Peking has been the practical determiner of this mystic succession.

Enough of introduction. I add but one word more. In looking back to the cursory review of recent exploration with which these remarks were commenced, I cannot but note, with some feeling of self-vindication in regard to time and labour heretofore spent in the elucidation of the great Venetian traveller of the Middle Ages, that all the explorers whom I have named have been, it may be said with hardly a jot of hyperbole, only travelling in his footsteps,—most certainly illustrating his geographical notices.

If Wood and Gordon and Trotter have explored Pamir, so did Messer Marco before them. Shaw, Hayward, and Forsyth in Kashgar; Johnson in Khotan; Cooper and Armand David on the eastern frontier of Tibet; Richthofen in Northern and Western China; Ney

a monastery in the Urat country, north of the Hoang-ho. This abbot was rich, and having amassed 30,000 taels he devoutly determined to make an offering of it to the Grand Lama at Lhassa. He set out, accordingly, with a great retinue of monks. But these were excessively averse to the idea of carrying all their silver to Lhassa; probably they chanted in Mongol something like the medieval Latin rhymes Rome :—

'O vos bursæ turgidæ *Lassam* veniatis,
Lassae viget physica bursis constipatis!'

So, in crossing a river, they pitched in their own living Buddha and carried back the treasure. The abbot was, however, cast up on the shore, and continued his journey to Lhassa, whence he had returned, two or three years before P. David's visit, to his ancient convent. The brethren, in the belief that their superior had quitted his former shell, had duly selected a young Mongol as his re-incarnation. Their disgust, therefore, was great to see their old chief reappear. The popular feeling was in favour of the old abbot; but the monks, with their ill-gotten gear, were too strong, and the unlucky *Gigen* was obliged to retire to a remote monastery, where he lived as a simple Lama.

Elias and Bushell in Mongolia; Paderin at Karakorum; Prejevalsky in Tangut; all have been tracking his steps and throwing light, consciously or unconsciously, on his Herodotean chapters. And yet what a vast area that he has described from personal knowledge remains beyond and outside of the explorations and narratives of these meritorious travellers!

There remains but to add that the engagement to assist Mr. Morgan in the production of this work was made, some eighteen months ago, under circumstances which afforded leisure for the task. The promise has had to be kept under very different circumstances of place and occupation; and this must be the apology for some oversights, and perhaps some repetitions, in the Notes and Introduction.[1]

H. YULE.

LONDON: *February* 23, 1876.

[1] Almost along with the revised proofs of these pages I have received Mr. Markham's publication of the journeys of Bogle and Manning; not in time to benefit by it, unless by a few minor insertions in the Supplementary Notes.

AUTHOR'S PREFACE.

FOUR YEARS AGO, thanks to the suggestion of the Imperial Geographical Society, warmly seconded by the Minister of War, whose intelligent co-operation in all scientific matters is so well known, I was appointed commander of an expedition to Northern China, with the view of exploring those remote regions of the Celestial Empire, about which our knowledge is of the most limited and fragmentary kind, derived for the most part from Chinese literature, from the descriptions of the great thirteenth-century traveller—Marco Polo, and from the narratives of the few missionaries who have from time to time gained access to these countries. But such facts as are supplied by all these sources of information are so vague and inaccurate that the whole of Eastern High Asia, from the mountains of Siberia on the north to the Himalyas on the south, and from the Pamir to China Proper, is as little explored as Central Africa or the interior of New Holland. Even the orography of this vast plateau is most imperfectly known, and as to its physical nature—i.e. its geology, climate, flora, and fauna—we are almost entirely ignorant.

Nevertheless this terra incognita, exceeding in extent the whole of Eastern Europe, situated in the centre of the greatest of all the continents, at a higher elevation above the level of the sea than any other country on the face of the globe, with its gigantic mountain ranges and boundless deserts, presents from a scientific point of view grand and varied fields of research. Here the naturalist and the geographer may pursue their respective studies over a wide area. But great as are the attractions of this unknown region to the traveller, its difficulties may well appal him. On the one hand, the deserts, with all their accompanying terrors—hurricanes, lack of water, burning heat and piercing cold, must be encountered; on the other, a suspicious and barbarous people, either covertly or openly hostile to Europeans.

For three consecutive years we faced the difficulties of travel in the wild countries of Asia, and only owing to unusual good fortune attained our object of penetrating to Lake Koko-nor and to the upper course of the Blue River (Yang-tse-Kiang) in Northern Tibet.

Good fortune, I repeat, never forsook me throughout my journey, from beginning to end. In my young companion, Michail Alexandrovitch Pyltseff, I had an active and zealous assistant, whose energy never failed in the most adverse circumstances; whilst the two Trans-Baikal Cossacks, Pamphile Chebayeff and Dondok Irinchinoff, who accompanied us in the second and third years of our travels, were brave

and indefatigable men, who served the expedition faithfully and loyally. I should also mention with equal gratitude the name of our late envoy at Peking —Major-General Alexander Gregorievitch Vlangali; for he was chiefly instrumental in organising the expedition, and he was its warmest supporter from first to last.

But although fortunate in the moral support I received, on the other hand the material resources of our expedition were extremely inadequate, and this circumstance impaired its efficiency. To say nothing of the privations which we experienced on the journey, entirely owing to the want of money, we were unable to provide ourselves even with the requisite good instruments for taking observations. For instance, we had only one mountain barometer, which soon broke, and I was obliged to have recourse to the ordinary Réaumur thermometer to determine heights by boiling water,[1] obtaining less accurate results; for magnetic observations we had nothing but a common compass adapted for this purpose at the observatory of Peking. In fact, our outfit, even of the most necessary instruments for scientific observations, was of the most meagre description.

In the course of nearly three years,[2] in traversing

[1] Parrot's thermometer, which I took with me from St. Petersburg for measuring altitudes, broke during the journey through Siberia; however, in such a journey as ours, this instrument would have been too troublesome, and almost impossible to protect from breakage.

[2] From November 29, 1870, to October 1, 1873, i.e. from the day of our departure from Kiakhta to the day of our return to that place.

Mongolia, Kan-su, Koko-nor, and Northern Tibet, we travelled 11,100 versts (7,400 miles), 5,300 (3,530 miles) of which, i.e. the whole distance out, were sketched by means of the compass. This map, which is appended on the reduced scale of 40 versts (or about 26⅔ miles) to the inch,[1] has been based on 18 astronomical observations for latitude, which I determined by means of a small universal instrument.[2]

The magnetic declination was ascertained at nine places, and at seven the horizontal influence of the earth's magnetism. Four times a week we took meteorological observations, frequently noting the temperature of the earth and water, and the moisture of the atmosphere with the psychrometer. We determined the altitudes with the aneroid and boiling water. Our researches were chiefly directed to physical geography and the special study of mammalia and birds; we made ethnological observations whenever circumstances would permit. We also collected and brought home 1,000 specimens of birds belonging to 238 different genera, 130 skins of mammalia, large and small, comprising 42 kinds; about 70 specimens of reptiles; 11 descriptions of fish; and more than 3,000 specimens of insects.

Our botanical collection includes the flora of all

[1] Reduced again, in the English version accompanying this translation, to a scale of slightly more than one-half that amount per inch.

[2] The longitude of these points, which unfortunately could not be determined, was found approximately by projecting my route survey between the latitudes fixed, and by taking into account the declination of the needle.

the places we visited—500 to 600 kinds of plants represented by 4,000 specimens. Our small mineralogical collection contains samples of the minerals of all the mountain ranges we visited.

Such are the scientific results of our journey; and these met with warm approbation, not only from the Geographical Society, but from the different men of science who volunteered their services to classify them.

The academician K. T. Maximovitch kindly undertook the description of the flora, which will form the third volume of the present edition of our travels. The second volume will comprise our special studies on the climate of those parts of Inner Asia that we visited, and notes on the zoology and mineralogy will be contributed by A. A. Inostrantseff and K. T. Kessler, professors at the St. Petersburg University; A. T. Moravitz, the entomologist; N. A. Severtsoff, W. K. Tachanoffsky, the zoologists; and A. A. Strauch, academician. All these *savants* have generously assisted me in classifying the different kinds of animals, plants, and minerals mentioned in the pages of this book.

Lastly, I must express my earnest gratitude to Colonel Stubendorff of the Staff Corps, and Colonel Bolsheff of the Topographical Department, who have taken a keen interest in compiling the map from my route survey; and also to Fritsche, director of the Peking Observatory, who gave me hints as to the astronomical and magnetic observations, and kindly undertook to work these out. This first volume of

our travels comprises descriptions of the physical geography and ethnography of the country we visited, and also a narrative of the progress of the expedition. The two following volumes will treat of special subjects, and will appear—the second in December of the present year, and the third a year later, i.e. at the end of 1876.

N. PREJEVALSKY.

ST. PETERSBURG : *January* 1, 1875.

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CHAPTER I.

FROM KIAKHTA TO PEKING.

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EARLY in November 1870, after posting through Siberia, I arrived with my young companion, Michail Alexandrovitch Pyltseff, at Kiakhta, where our journey through Mongolia and the adjacent countries of Inner Asia was to begin. At Kiakhta we were at once sensible of our approach to foreign countries. The strings of camels in the streets of the town, the sunburnt faces and prominent cheekbones of the

Mongols, the long pigtails of the Chinese, the strange and unintelligible language, all plainly told us we were about to bid a long farewell to our country and all dear to us there. Hard as it was to reconcile ourselves to the thought, we were somewhat cheered by the prospect of soon commencing a journey which had been the dream of my early childhood. Entirely in the dark as we were in regard to our future wanderings, we resolved first of all to go to Peking, there to obtain a passport from the Chinese Government, and then to start for the remoter regions of the Celestial Empire. This advice was given us by General Vlangali, at that time our Ambassador in China, who from first to last assisted the expedition by every means in his power, and whose generous forethought contributed more than anything to its ultimate success. Afterwards, on our first march from Peking, we saw the advantage of having a passport direct from the Chinese Foreign Office, instead of one from the Frontier Commissioner at Kiakhta. Such a passport gave us far greater importance in the eyes of the local population, a very material consideration in China, and (it must be confessed) in other countries also.

Europeans have the choice of two modes of conveyance from Kiakhta to Peking; either by post-horses, or by caravan camels engaged by special bargain with their owners.

Postal communications through Mongolia were established by the treaties of Tien-tsin (1858) and

Peking (1860). By these conventions the Russian Government acquired the right of organising at its own expense a regular transmission of both light and heavy mails between Kiakhta, Peking, and Tien-tsin. The Mongols contract to carry the post as far as Kalgan, the Chinese, the rest of the way. We have opened post-offices at four places: Urga, Kalgan, Peking, and Tien-tsin. At each of these a Russian official is stationed, who superintends the post-office, and attends to the regular despatch of the post. The light mails leave Kiakhta and Tien-tsin three times a month: the heavy mails only once a month. The latter are carried on camels escorted by two Cossacks from Kiakhta, while the former are accompanied only by Mongols, and are carried on horses. They are usually taken from Kiakhta to Peking in two weeks; while the heavy mails take from twenty to twenty-four days. The cost to our Government of maintaining the post through Mongolia is about 17,000 rubles (2,400*l.*); the receipts at all the four offices amounting altogether to 3,000 rubles (about 430*l.*).[1]

The Chinese Government has also undertaken to transport, from Kiakhta to Peking and back, every three months, at its own cost, for the convenience of our clerical and diplomatic Missions at Peking, a heavy post not exceeding 26 cwts. in weight each time.

[1] There is another post-road between Urga and Kalgan, established by the Chinese for themselves. From this road another one to Uliassutai branches off on the border of the Khalkas country, near the station of Sair-ussu.

On extraordinary occasions when papers of great importance have to be transmitted to our Ambassador at Peking, or by him to his Government, it is arranged that Russian officers may be despatched as couriers, notice being given a day before the despatch of the messenger to the Chinese governor at Kiakhta and the Ministry of War at Peking. Horses are then prepared at all the Chinese and Mongolian stations, and the entire distance of 1,000 miles may in this way be accomplished in a two-wheeled Chinese government cart in nine or ten days. No charge is made for this special service, but according to established custom, the Russian officer presents a gratuity of three silver rubles (about 8*s.*) at each station. Another mode of communication across Mongolia is by hiring a Mongol who undertakes to transport the traveller by camel caravan across the Gobi. This is the way in which all our merchants travel on their way to China for business purposes, or on their way back to Russia. The traveller usually disposes himself in a Chinese cart, which presents the appearance of a great square wooden box, set on two wheels, and closed on all sides. In the fore part of this machine there are openings at the sides, closed with small doors. These holes serve the traveller as a means of ingress and egress to his vehicle, in which he must preserve a recumbent position head foremost, in order that his legs may not be on a higher level than his head. The shaking in this kind of car baffles description. The smallest stone or lump of earth over which one

CHINESE CART.

The vehicle represented in the above woodcut belonged to the Amban or Governor of Urga, and was photographed in front of the house of the Russian Consul, where this functionary happened to be paying an unofficial visit. The cart in which our author travelled, and which is described in the text, resembled the one shown on this page.

of the wheels may chance to roll produces a violent jolting of the whole vehicle and consequently of its unfortunate occupant. It may easily be imagined how his sufferings may be aggravated when travelling with post horses at a trot.

In a conveyance of this kind, hired from a Kiakhta merchant, we determined to proceed with camels through Mongolia to Kalgan. Our contractor was a Mongol who had brought a quantity of tea to Kiakhta and was returning for a fresh load. After some negotiations, we finally agreed with him for the transport of ourselves, one Cossack, and all our baggage, to Kalgan for 70 lans (140 rubles, 20*l.*).[1]

The journey was not to take more than forty days, a comparatively long time, as the Mongols usually convey travellers from Kiakhta to Peking in twenty-five days, but the price charged for this accelerated speed is proportionately higher. I wished to acquaint myself as far as I could with the nature of the country through which I was about to travel, and, therefore, a slow rate of progress was rather an advantage to me than otherwise. A Cossack of the Buriat tribe belonging to the Trans-Baikal force was ordered to accompany us as interpreter of the Mongol language. He proved to be an excellent dragoman; but being the son of a rich man, and disliking the hardships of travel, he soon became so

[1] *Lan* appears to be the Russian way of representing the word which French and English sinologues write usually as *liang*, viz. the taël, or Chinese 'ounce of silver.'—Y.

home-sick that I was obliged to send him back, and received two new Cossacks in his stead.

At length, towards the evening of November 29, new style,[1] we started on our journey. The harnessed camel set in motion the cart which contained myself and companion and our common friend, a setter, 'Faust,' brought with us from Russia. Soon we left Kiakhta behind, and entered Mongolia. Farewell my country, a long farewell! shall we ever see thee again, or shall we never return from that distant foreign land?

For the whole distance of about 200 miles[2] from Kiakhta to Urga the appearance of the country quite equals that of the best parts of our Trans-Baikalia; here we see the same abundance of trees and water, the same luxuriant pasturage on the gentler slopes of the hills; in fact, there is nothing to remind the traveller of his proximity to the desert. The absolute height of the region between Kiakhta and the river[3] Kara-gol averages 2,500 feet; then the country rises till it attains at Urga an elevation of 4,200 feet above the level of the sea. This ascent forms the outer northern border of the vast plateau of the Gobi.

[1] All the dates in this translation have been reduced to the new style.—M.

[2] According to a recent traveller, the distance from Urga to Kiakhta is 176 miles. See 'Rough Notes of a Journey made in the Years 1868–73,' p. 19. Trübner, 1874.—M.

[3] The word *gol* is the Mongol for river, and is always added to the name of a river, in the same way as *nor* (more correctly *nur*, lake) to the name of a lake, and *daban* (range) or *ula* (mountain) to the name of a range or a mountain. [See Supplementary Note.]

The district between Kiakhta and Urga may be generally described as hilly, but the elevations are not great, and most of the hills are round. The ranges have an easterly and westerly direction, and are totally devoid of lofty peaks and steep bluffs ; the passes are, therefore, not high, and the ascents and descents are gradual.

Three of these ranges following the road to Urga are distinguished from the rest by their greater elevation: one on the north bank of the river Iro ; a second, the Manhadai, in the centre ; and third, the Mukhur, close to Urga. The only steep and lofty pass across these mountains is the Manhadai, which may be avoided by taking a more circuitous road to the east.

The district we are describing is plentifully watered ; its chief rivers are the Iro and Kara-gol, flowing into the Orkhon, a tributary of the Selenga. The soil is mostly black earth or loam, well adapted for tillage ; but agriculture has not yet been introduced into this region, and only a few acres, about 100 miles from Kiakhta, have been cultivated by Chinese settlers.

The hilly belt of country between Kiakhta and Urga is well wooded. But the trees, which chiefly grow on the northern slopes of the hills, are far inferior in size, shape, and variety to the Siberian timber. The prevailing kinds are fir, larch, and white birch, interspersed with a few cedars, ash, and black birch. The hill-sides are occasionally dotted with sparse clumps of wild peach and acacia, and the

rich grass supplies abundant food for the cattle of the Mongols all the year round.

Of the animal kingdom we found few varieties in winter. The most common kinds were the grey partridge (*Perdix barbata*), hare (*Lepus Tolai*), and Alpine hare (*Lagomys Ogotono*); wintering larks (*Otocoris albigula*), and linnets (*Fringilla linota*), along the road-side in large flocks. Handsome red-billed jackdaws (*Fregillus graculus*) became more numerous as we approached Urga, where they actually build their nests in the house occupied by our Consul. The natives told us there were numbers of roe in the woods, as well as wild swine and bears. In fact, the fauna of this district, as well as its flora, is quite of a Siberian character.

After a week's journey, we arrived at the town of Urga, where we passed four delightful days with the family of the Russian Consul, J. P. Shishmareff.

The town of Urga, the chief place of Northern Mongolia, is situated on the river Tola, an affluent of the Orkhon, and is well known to all the nomads under the name of Bogdo-Kuren or Ta-Kuren, i.e. sacred encampment; its name of Urga, derived from the word *Urgo* (palace), was given it by the Russians.

The town is divided into two halves—the Mongolian and Chinese. The former is called Bogdo-Kuren, and the latter, not quite three miles to the east of it, bears the name of Mai-mai-cheng, i.e. place of trade. In the centre, half-way between the two parts of Urga, well situated on rising ground near

GENERAL VIEW OF THE TOWN OF URGA.

the bank of the Tola, is the two-storied house of the Russian Consul, with its wings and outbuildings.

The population of Urga is estimated at 30,000. The inhabitants of the Chinese town are all Chinese officials or traders. Both these classes are forbidden by law to live with their families, or lead a thoroughly settled life. But the Chinese generally evade the law by keeping Mongol concubines. The Manchu officials, however, bring their families with them.

The most striking features in the Mongolian town are the temples, with their gilt cupolas, and the palace of the *Kutukhtu*, or living representative of the Divinity.

The exterior of this palace differs but slightly from the temples, the chief of which in size and architectural pretensions is the shrine of *Maidari*, the future ruler of the world.[1] This is a lofty, square building, with flat roof and battlemented walls. The image of Maidari, raised on a pedestal, occupies a central position in the interior; he is represented in a sitting posture with a *beaming* expression of face. This image measures 33 feet in height, and is said to weigh about 125 tons: it is of gilt brass, manufactured at the town of Dolon-nor,[2] and brought in pieces to Urga.

Before the image of Maidari is placed a table

[1] *Maidari* is the Mongol form of the Indian *Maitreya*, the name of the Buddha that is next to come, the fifth of the World-period in which we live.—Y.

[2] This town is on the south-east border of Mongolia, and is the chief place for the manufacture of Mongol idols.

covered with votive offerings, amongst which I noticed a common glass stopper. Numbers of other lesser deities (burkhans) are ranged round the walls, which are also adorned with a variety of pictures of sacred subjects.

Besides the temples and a few Chinese houses, the remaining habitations of the Mongolian town consist of felt tents (yurtas) and little Chinese houses, each standing in its own plot of land, surrounded by a light fence. Some of these small enclosures stand in rows, so as to form a kind of street, others are grouped together without any apparent order or regularity. The market square occupies a central position; here four or five Russian merchants have opened shops and ply a retail trade, and are also engaged in the transport of tea.

The standard of value most current in Urga, as well as throughout Northern Mongolia, is brick-tea, which, for this purpose, is often sawn up into small lumps. The value of goods sold in the market and shops is reckoned by the number of bricks of tea: for instance, a sheep is worth from 12 to 15 bricks; a camel 120 to 150; a Chinese pipe from 2 to 5, and so on. Russian banknotes and silver rubles are accepted in payment by the people of Urga, and usually by all the natives of Northern Mongolia; but Chinese lans are preferred, and brick-tea is by far the most acceptable, especially among the poorer classes. Anyone, therefore, desirous of making purchases in the market, must lug about with him a sackful or cartload of heavy tea-bricks.

The population of the Mongolian part of Urga is chiefly composed of lamas,—i.e. of the clergy. At Bogdo-Kuren they number as many as 10,000. This statement may appear an exaggeration, but if the reader take into consideration the fact that a third of the whole male population of Mongolia belongs to the lama class, he will not doubt its accuracy. There is a large training-school at Urga for boys destined to become lamas; it is divided into three faculties, viz. Divinity, Medicine, and Astrology.

Urga ranks in the estimation of the Mongols next to Lhassa,[1] in Tibet, for sanctity.

In these two towns the principal religious dignitaries of the Buddhist world reside. In Lhassa, the Dalai Lama, with his assistant Pan-tsin-Erdeni;[2] in Urga, the Kutukhtu, or third person in the Tibetan patriarchate.

According to the Lama doctrine these dignitaries are the terrestrial impersonations of the Godhead, and never die, but are renewed by death. They believe that after death their souls pass into the bodies of newly-born boys, and thus re-appear to men under fresher and more youthful forms. Search is made in Tibet for the new-born Dalai Lama,

[1] Lhassa, the capital of Tibet, is called by the Mongols Munhutsu (the ever sacred).

[2] Pan-tsin-Erdeni does not reside in Lhassa itself, but at the monastery of Chesi-Lumbo [i.e. at the place which is variously called in our maps Teshu-lumbo, Jachi-lunpo, and Shiggatzi, at least 120 miles from Lhassa. It is scarcely correct to call the Panjan Irdeni or Panjan Rimbochi, the personage whom Lieut. Samuel Turner visited as envoy from Warren Hastings in 1783, and whom he calls the *Teshoo Lama*, the 'assistant' of the Dalai-Lama.—Y.].

according to the instructions of his predecessor. In the same way the Kutukhtu of Urga is generally sought for in Tibet, in accordance with the prophetic indications of the Dalai Lama. When the newly-born saint is discovered, an immense caravan is sent from Urga to convey him to Bogdo-Kuren; and a thank-offering for his discovery, amounting to 30,000 lans in money, and sometimes even more, is presented to the Dalai Lama.

During our stay at Urga the throne of the Kutukhtu remained unoccupied, the holy potentate having died a year or two before; and although his successor had been discovered in Tibet, the Mongol embassy could not make their way thither, owing to the Mahomedan (Dungan) insurrection, which had extended to Kan-su, through which lies the road from Urga to Lhassa.

Besides the Kutukhtu of Urga, there are other Kutukhtus or Gigens in other temples in Mongolia and at Peking itself, but they are all inferior in rank to their brother of Bogdo-Kuren, and when they appear before him they must prostrate themselves like other mortals.

The Chinese Government fully appreciates the extraordinary influence which these Gigens and Lamas exercise over the ignorant nomads, and on this account protects the whole religious hierarchy in Mongolia. In this way the power of the Chinese is perpetuated, and the hatred generally entertained by the Mongols for their oppressors somewhat abated. The Gigens, individually and as a class,

are, with very few exceptions, of very limited understanding. Brought up under the watchful guardianship of the neighbouring lamas, they have no opportunity of cultivating their intellects even in the ordinary affairs of life, and exist in a little world of their own. The whole education even of the most important among them consists of elementary instruction in the Tibetan language and the Lamaist books, and even this knowledge is often most superficial. Accustomed from infancy to be looked on as living deities, they seriously believe in their own divine origin and renewed birth [1] after death. Their intellectual inferiority ensures the ascendancy of the attendant lamas, who do not scruple to poison clever boys whose lot it has been to belong to this sacred class. Such a fate is said not unfrequently to befall the Kutukhtus of Urga through the connivance of the Chinese Government, which dreads the rivalry of any independent personage at the head of the Mongol hierarchy.

The Kutukhtu of Urga is very wealthy, and besides the offerings of enthusiastic devotees he owns 150,000 slaves, who inhabit the environs of Urga, and other parts of Northern Mongolia. All these slaves are under his immediate authority, and form the so-called *Shabin* class.

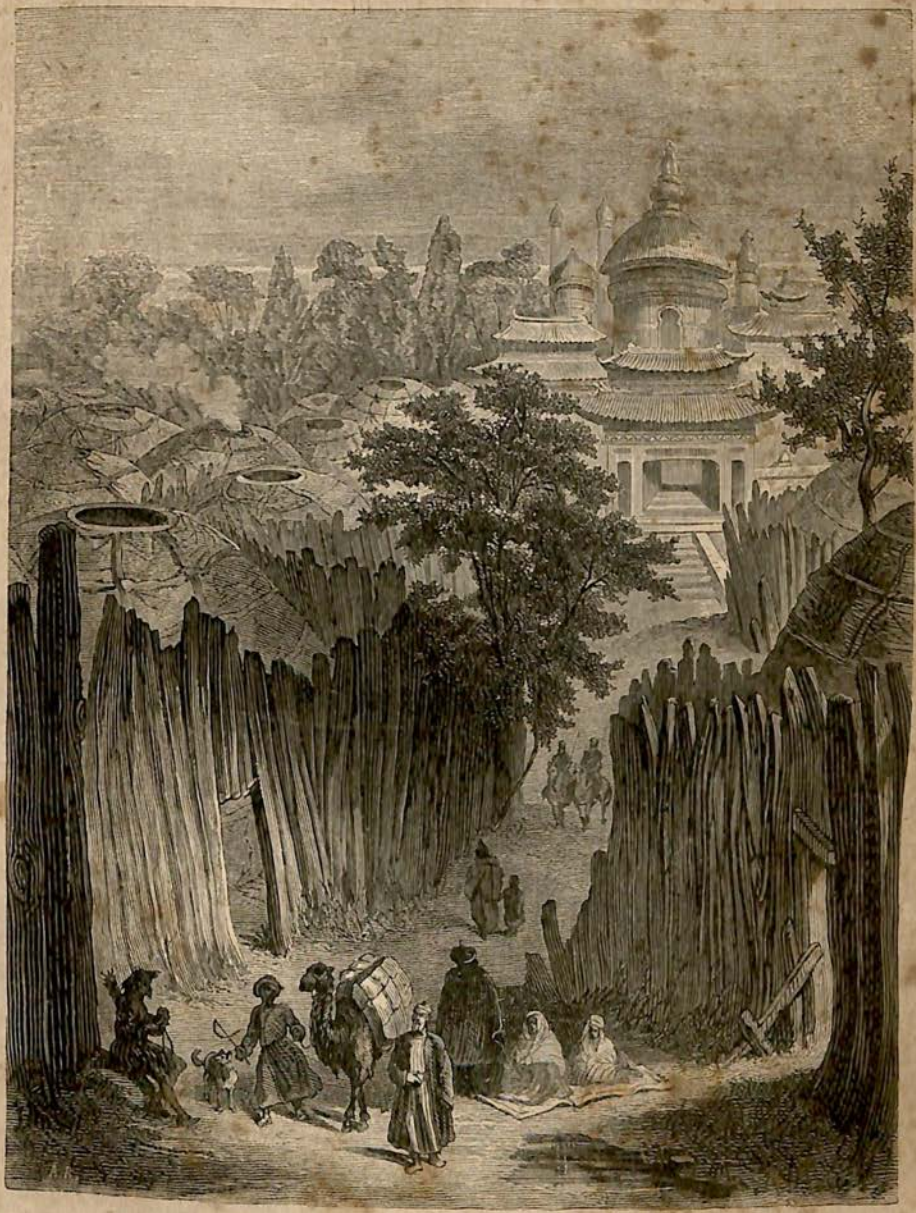
Outwardly the Mongol part of Urga is disgustingly dirty. All the filth is thrown into the streets, and the habits of the people are loathsome.

[1] The Gigens whom we met during our journey never made use of the expression 'at my death,' but always 'at my renewed birth.'

To add to all this, crowds of starving beggars assemble on the market-place; some of them (mostly poor old women) make it their final resting place. It would be difficult to picture to oneself anything more revolting. The decrepid or crippled hag lies on the ground in the centre of the bazaar with a covering of old pieces of felt thrown to her by way of charity. Here she will remain, too weak to move, covered with vermin and filth, imploring alms from the passer-by. In winter the cold winds cover her den with the snowdrift; beneath which she drags out her miserable existence. Her very death is of an awful nature; eye-witnesses have told us how, when her last moments are approaching, a pack of dogs gather round and wait patiently for their victim to breathe her last, when they devour her corpse, and the vacant den soon finds another such occupant. In the cold winter nights the stronger beggars drag the feeble old women out into the snow, where they are frozen to death, crawling themselves into their holes to avoid that fate.

But these sights are not the only ones of the sacred city. More sickening scenes await the traveller if he resort to the cemetery, which is situated close to Urga. Here the dead bodies, instead of being interred, are flung to the dogs and birds of prey. An awful impression is produced on the mind by such a place as this, littered with heaps of bones, through which packs of dogs prowl, like ghosts, to seek their daily repast of human flesh.

No sooner is a fresh corpse thrown in than the



STREET IN URGA.

dogs tear it to pieces, and in a couple of hours nothing remains of the dead man. The Buddhists consider it a good sign if the body be quickly devoured; in the contrary event they believe that the departed led an ungodly life. The dogs are so accustomed to feed in this way that when a corpse is being carried through the streets of the town to the cemetery the relations of the deceased are invariably followed by dogs, sometimes belonging to his own encampment (yurta).

The government of Urga, together with the two eastern aimaks (khanates) of the Khalkas, or of Northern Mongolia, viz. those of Tushetu-khan, and Tsitseng-khan, is in the hands of two ambans or governors. One of them is always a Manchu sent from Peking, the other, one of the local Mongol princes. The two remaining aimaks of the Khalkas, those of the Djasaktu-khan and Sain-noin, are under the Tsiang-tsiun (commander-in-chief) of Uliassutai.

Although the Mongol Khans who govern these aimaks are absolute masters in all that concerns the internal affairs of their khanates as sovereign princes, they, nevertheless, own allegiance to their Chinese rulers, who are the jealous guardians of Chinese ascendancy over the nomads.

During our stay at Bogdo-Kuren we heard terrible reports of the Dungans, i.e. the Mahomedan insurgents, who had just plundered Uliassutai, and threatened Urga with a similar fate. Their apprehensions for this city, which is of such importance in

the eyes of the nomads, induced the Chinese to march hither 2,000 of their own soldiers, and to assemble 1,000 Mongol troops. But the notorious cowardice of these fighting men afforded a very insufficient safeguard to Urga, and the Russian Government was obliged to send a considerable force (600 infantry and Cossacks, with two guns) to protect the consulate and the tea trade. This detachment remained at Urga more than a year, and thanks were due entirely to it if the insurgents relinquished their attack on Bogdo-Kuren.

At Urga the Siberian character of Northern Mongolia ceases. On crossing the Tola the traveller leaves behind him the last remaining stream; and here too, on Mount Khan-ola, considered sacred ever since the Emperor Kang-hi hunted there,[1] he must take his last look at forest scenery. Southwards, as far as the borders of China Proper, lies the same desert of Gobi,[2] which extends like an enormous girdle across the plateau of Eastern Asia, from the western spurs of the Kuen-lun to the Khingan mountains, which divide Mongolia from Manchuria.

The western part of this desert, especially between the Thian-shan and Kuen-lun, is entirely unexplored even at the present day. The eastern half is best known along the Kiakhta and Kalgan

[1] It is probable that the sacredness of Khan-ola is due to a more ancient and notable circumstance, viz. that the great Chinghiz-Khan was buried there; see 'Quatremère, H. des Mongols,' p. 117 *seqq.*; and 'Marco Polo,' bk. i. ch. li. note 3.—Y.

[2] The word *Gobi* in Mongol literally means a waterless barren plain almost devoid of grass. The word for steppe is *Tala*.

road, which crosses it diagonally. Here the barometrical levels of Fuss and Bunge in 1832, the journeys of Timkowski, Kowalevsky, and other savants, some of whom have generally accompanied our ecclesiastical missions to China, have enlightened us on the topography and physical character of this part of Asia. Lastly, the recent journey of the astronomer Fritsche on the Eastern Gobi, and my own observations in its south-eastern, southern, and central parts, have supplied, not merely conjectural but most accurate data concerning the topography, climate, flora, and fauna of the eastern half of the great desert of Central Asia.

The barometrical levelling of Fuss and Bunge first exploded the theory, till then prevalent among geographers, of the great height (8,000 feet) of the whole Gobi, reducing it to 4,000 feet. Further observations by the same savants proved that in the direction of the Kiakhta-Kalgan caravan road the absolute height of the plateau in the middle part sinks to 2,400 feet, or as Fritsche will have it, even to 2,000 feet; and this depression continues for about sixty-five miles, but does not extend far to the east, as Fritsche's journey showed, nor to the west, as we found on our march from Ala-shan to Urga, through the centre of the desert. It should also be mentioned that the Eastern Gobi is not so thoroughly desert in character as it becomes towards the south and west. Thus, the plains in Ala-shan, and in the vicinity of Lake Lob, are sterile and desolate in the extreme.

As we have before stated, the Siberian character of the country, with its mountains, forests, and abundant supply of water irrigation, ceases near Urga, and from hence southwards nature assumes the true Mongolian aspect. After the first day's journey the traveller finds everything changed.

A boundless steppe, slightly undulating in some parts, in others furrowed with low rocky ridges, fades away in the bluish misty distance of the horizon without any break in its sameness. Here and there may be seen numerous herds and flocks of Mongols grazing, and their encampments frequently stand near the roadside. The road is so good as to be perfectly practicable for a tarantass.

The Gobi Proper has not yet begun, and the belt of steppe we are describing, with its soil of mingled clay and sand, clothed with excellent grass, serves as a prelude to it. This belt extends from Urga to the south-west along the Kalgan road for about 130 miles, and then imperceptibly shades off into the sterile plains of the Gobi Proper.

Even the Gobi is rather undulating than flat, although you sometimes come on tracts of perfectly level plain, extending unbroken for many miles together. These level tracts are particularly frequent in the central part of the plateau, whereas in the north and south there are plenty of low hills either in detached groups or in prolonged ridges, rising only a few hundred feet above the surrounding plains, and for the most part consisting of bare rocks. Their ravines and valleys are all marked by dry water-

courses, which only contain water after heavy rains, and even then for not more than a few hours. Along these water courses the inhabitants dig wells to supply themselves with water. No running streams are met with the whole way from the River Tola to the borders of China Proper, i.e. for about 600 miles; the rains in summer forming temporary lakes in the loamy hollows which soon dry up during the severe heat.

The soil of the Gobi Proper is composed of coarse reddish gravel and small pebbles interspersed with different stones such as occasional agates. Drifts of yellow shifting sand also occur, although of a less formidable character than those in the southern part of the desert.

Vegetation finds no sustenance here, and the Gobi produces even grass but scantily. Completely barren spots are certainly rare along the Kalgan road, but such grass as grows is less than a foot high, and hardly conceals the reddish-grey surface; only in those places where the gravel is replaced by clay, or in the hollows where the summer moisture is longer retained, a kind of grass called by the Mongols *Dirisun* (*Lasiagrostis splendens*), grows in clumps four to five feet high, and as tough as wire. Here and there too some solitary little flower finds an asylum, or if the soil is saline the *budarhana* (*Kalidium gracile*), the favourite food of camels, may be seen. Everywhere else the wild onion, scrub wormwood, and a few other kinds of *Compositæ* and *Gramineæ*, are the prevailing vegetation of the desert. Of trees and

bushes there are absolutely none; indeed, how could there be, in such a region? Putting out of question the natural impediments to vegetation, the winds of winter and spring blow day after day with such violence that you see even the humble shrubs of wormwood uprooted by them, rolled into bundles, and driven across the barren plain!

The population in the Gobi Proper is far more scanty than in the steppe country which precedes it. Indeed, none but the Mongol and his constant companion the camel, could inhabit these regions, destitute alike of water and timber, scorched by an almost tropical heat in summer, and chilled in winter to an icy cold.

The barrenness and monotony of the Gobi produce on the traveller a sense of weariness and depression. For weeks together the same objects are constantly before his eyes: cheerless plains, covered in winter with the yellowish withered grass of the preceding year, from time to time broken by dark rocky ridges, or by smooth hills, on the summit of which the swift-footed antelope (*Antilope gutturosa*) occasionally casts a light shadow. With heavy measured tread the laden camels advance; tens, hundreds, of miles are passed, but the changeless desert remains sombre and unattractive as ever. . . . The sun sets, the dark canopy of night descends, the cloudless sky glitters with myriads of stars, and the caravan, after proceeding a little further, halts for the night. The camels show unmistakable satisfaction at being freed from their burdens, and lie down

at once near the tents of their drivers, who busy themselves in preparing their unsavoury meal. In another hour men and beasts are asleep, and all around reigns the deathlike silence of the steppe, as though no living creature existed in it. . . . Besides the post road, which is farmed by Mongols, there are other routes across the Gobi from Urga to Kalgan which are usually followed by the caravans. At certain distances[1] along the post road wells are dug and tents pitched which serve as stations, but along the caravan-routes the number and size of the Mongol encampments depend on the quality and quantity of pasturage. These roads, however, are only frequented by the poorer inhabitants, who earn a livelihood from passing caravans either by begging, pasturing camels, or by the sale of dried *argols* (dung of animals), which is an article of great value both for the domestic use of the nomads and for travellers, as it is the only fuel in the whole Gobi.

Our days dragged on with tedious monotony. Following the central caravan-route we generally started at midday and marched till midnight, averaging twenty-seven to thirty-three miles per diem. During the daytime my companion and I generally went on foot a-head of the caravan and shot any birds we saw.

The crows soon came to be looked on as our bitter enemies, on account of their unbearable rapacity. Soon after we started I noticed some of these

[1] There are forty-seven post stations between Urga and Kalgan, along a distance of about 660 miles.

birds pursuing the baggage camels which followed our cart, and after perching on the packs fly away with something in their beaks. On a closer investigation, I discovered that they had torn a hole in one of the provision bags, and were purloining our rusks. They would hide their plunder somewhere on one side of the road, and then return again for more. After this discovery, all such thieves were summarily shot; but others soon appeared in their stead, to share a like fate.

This went on every day till we reached Kalgan. The rapacity of the crows in Mongolia surpasses belief. These birds, so shy with us, are there so impudent as to steal provisions almost out of the tents of the Mongols. Nay, they will actually perch on the backs of the grazing camels, and tear their humps with their beaks. The foolish, timid animal only cries at the top of its voice, and spits at its tormentor, who returns again and again to the back of the camel until it has inflicted a large wound by means of its powerful beak. The Mongols consider it wrong to kill birds, and so they cannot rid themselves of the crows, which accompany every caravan across the desert. It is impossible to leave any food outside the tent without its being instantly stolen by these audacious birds, who, if they can find nothing better, will tear the undressed hides off the boxes of tea. These crows and the kites in summer were our inveterate foes throughout the expedition. Many a time they robbed us of small skins which we had prepared for our collection, to say nothing

of the meat they stole; but many hundreds of them paid the penalty of their lives for their unceremonious effrontery.

The only other members of the feathered tribe which we saw in the Gobi were the sand-grouse and Mongol larks. Both these kinds are peculiarly characteristic of Mongolia.

The sand-grouse (*Syrrhaptes paradoxus*),[1] discovered and described at the end of the last century by the celebrated Pallas, is distributed over the whole of Central Asia as far as the Caspian Sea, and is occasionally met with as far south as Tibet. This bird, called *Boilduru* by the Mongols, and *Sadji* by the Chinese, only inhabits the desert, where it feeds on the seeds of different grasses (dwarf wormwood, *sulhir*, &c.), upon which it entirely depends for food in winter. In the cold season vast numbers flock together in the desert of Ala-shan, attracted by the seeds of the *sulhir* (*Agriophyllum Gobicum*), of which they are very fond. In summer some of them appear in Trans-Baikalia, where they breed. Their eggs, three in number, are laid on the bare ground, where the hen bird sits staunchly, although the bird is in ordinary circumstances timid. In winter they are often compelled by the cold and

[1] Or *Syrrhaptes Pallasii*, allied to the *Pterodes* to which the name sand-grouse is, I believe, more usually applied, but with some curious peculiarities. This bird, whose proper home is in the steppes of North-Eastern Asia, and which is described by Marco Polo under the name of *Barguerlac* (Turki *Baghirtlak*), visited England in considerable numbers between 1859 and 1863, but has not since, I believe, renewed its immigration, so far from its natural habitat (see *Marco Polo*, 2nd ed., i. 265, and the references there).—Y.

snowstorms to take refuge in the plains of Northern China, where they may be seen in large packs; but as soon as the weather moderates they return to their native deserts. Their flight is remarkably rapid, and when in large numbers the whirring sound made by their wings is heard a long way, resembling the noise of an approaching storm.[1] They are very awkward runners on the ground, probably owing to the peculiar formation of their feet, the toes almost growing together, and the sole being covered with a horny substance like the hoof of a camel.

After their morning meal, the sand-grouse always resort to some spring, well, or salt-lake to drink. Here they will not alight till they have first described two circles in the air to assure themselves of safety, and after hurriedly satisfying their thirst they fly off again. They will sometimes fly long distances to the water.

The Mongol lark (*Melanocorypha Mongolica*) is only met with occasionally on the desert tract; its habitat is in the grassy portions of the Gobi, and there in winter it is found by hundreds and thousands. Those we saw were mostly in the Southern Gobi; they are also not uncommon in China, at all events during winter.

The Mongol lark is the best songster of the Central Asian desert. In his music he rivals his European congener. He has also a remarkable

[1] Marco Polo's recollection of this characteristic is condensed into the words '*moult volant*.'—Y.

power of imitating the notes of other birds, introducing them into his own melody. Like our lark, he sings as he soars up to the sky, or when perched on a stone or stump of a tree. The Chinese call him *bai-ling*, and delight in his song, often keeping him as a cage-bird.

Like the sand-grouse, the Mongol lark visits the north, and breeds in Trans-Baikalia, although it prefers remaining in Mongolia, where it makes its nest on the ground like the European species, depositing three or four eggs in a little hole. In the desert of Mongolia, where the cold weather lasts all the spring, these larks form their nests late in the year, and we found their fresh-laid eggs in the beginning, and even the end, of June. Wintering in those parts of the Gobi where little, if any, snow falls, they withstand the severest cold (as much as –34° Fahr.),[1] finding shelter in the tufts of *dirisun*, the small seeds of which are at this season their chief food. This, and similar observations we have made, lead to the opinion that many of the feathered tribe are driven southwards in winter by want of food, and not by cold.

The Mongol lark is found as far south as the northern bend of the Yellow River, and then avoiding Ordos, Ala-shan, and the mountains of Kan-su, it re-appears in the steppe near Lake Koko-nor. Two other kinds of larks also winter in the Gobi in very large numbers (*Otocoris albigula*, *Alauda pispoletta*), and the Lapland ortolan (*Plectrophanes Lap-*

[1] A lower temperature even than this was recorded at Urga.

ponica); the latter, however, is mostly seen in the country of the Chakhars, i.e. on the south-eastern border of the Gobi.

Of mammalia peculiar to this desert only two characteristic kinds can be mentioned: the Alpine hare and antelope.

The Alpine hare (*Lagomys Ogotono*), or, as the Mongols call it, the *Ogotono*, belongs to the order of rodents, and is from the form of its teeth regarded as closely allied to the hare. It is about the size of the common rat and burrows in the earth, invariably choosing for its habitat the grass steppes, particularly where the ground is uneven, and the valleys in the mountains of Trans-Baikalia and the north of Mongolia. It is never found in the barren desert, and, therefore, does not inhabit the central and southern Gobi.[1]

The ogotono is a curious little animal of a sociable disposition, and where one of its burrows is found some tens, hundreds, or even thousands more will invariably be near it. In winter, when the cold is intense, they never leave their holes,[2] but as soon as the temperature becomes warmer they come out and sit at the entrance sunning themselves, or scamper from one burrow to another. The poor ogotono has so many enemies that it must be constantly on the look-out for danger. It will sometimes only venture half-way out of its hole, raising

[1] The ogotono is very numerous in the grass plains of South-eastern Mongolia.

[2] These little animals are never dormant in winter.

its head to assure itself of the absence of danger. Steppe-foxes, wolves, but especially buzzards, hawks, kites, and even eagles, daily destroy countless numbers of these little animals. The skill with which the winged assailants seize their prey is remarkable. I have often seen a buzzard descend so rapidly on its victim as not to give it time to retreat into its burrow, and an eagle on one such occasion swooped down from a height of at least 200 feet. The buzzard (*Buteo ferox*) feeds entirely on the ogotono; but such is the rapidity with which they breed that this wholesale destruction is probably the only way of checking their excessive increase. Curiosity is a distinctive trait of this animal; it will allow a man or dog to approach within ten paces of it, then suddenly disappear in its hole; but, in a few minutes its head may be seen at the entrance, and, if the object of its fears has removed a little further away, it will venture out and resume its former position. Another of its habits, peculiar also to other kinds of this tribe, is to lay in a store of hay for winter use, stacking it at the entrance of its home. The hay is collected towards the end of summer, carefully dried and made into little stacks weighing from four to five or even ten pounds. This serves for its couch underground and for food during the winter; but very often the labour is in vain and cattle devour its store. In such case the unfortunate little creature is reduced to feed on the withered grass which grows near its burrow.

The ogotono can exist a long time without water. In winter it can quench its thirst with snow, and in

summer with rain, or if there be no rainfall, with dew, which, however, is rare; but the question is what does it find to drink in spring and autumn, when for months together no rain or snow falls on the plateau and the atmosphere is excessively dry?

This little animal is found as far south as the northern bend of the Hoang-ho, beyond which it is replaced by other kinds.

The *dzeren* (*Antilope gutturosa*) is a species of antelope, about the size of the common goat, characteristic of the Gobi desert, especially of its eastern or less barren part. It is also met with in Western Mongolia,[1] and in the environs of Lake Koko-nor, which is the southern limit of its distribution.

These antelopes are gregarious, their herds sometimes numbering several hundred or even thousand head in those parts where food is plentiful, but they are most frequently seen in smaller numbers of fifteen to thirty or forty head; although they avoid the neighbourhood of man, they always select the best pasturage of the desert, and, like the Mongols, migrate from place to place in search of food, sometimes travelling great distances, especially in summer, when the drought drives them to the rich pasture lands of Northern Mongolia, and as far as the confines of Trans-Baikalia. The deep snows of winter often compel them to travel several hundred miles in search of places almost or entirely free from snow. They belong exclusively to the plains, and

[1] There are no dzerens in Ala-shan on account of the utterly desert and barren character of that country.

carefully avoid the hilly country, but sometimes appear in the undulating parts of the steppe, particularly in spring, attracted by the young grass, which shoots up under the influence of the sun's warmth. They shun thickets and high grass, excepting at the time of parturition, which is in May, when the doe seeks the covert to conceal her newborn offspring. But a few days after their birth the fawns follow their mothers about everywhere, and soon rival the fleet-footedness of their sires. They very seldom utter any sound, though the males occasionally give a short loud bleat. Nature has endowed them with excellent sight, hearing, and smell; their swiftness is marvellous, and their intelligence well developed, qualities which prevent their falling so easy a prey, as they otherwise would, to their enemies—man and the wolf.

Antelope-shooting is a difficult business, both because the animal is so shy, and because even when hit mortally it will often get away. In the open steppe a man cannot approach within 500 paces of them, and if they are once startled you may say twice that distance. Their careful avoidance of any cover makes it next to impossible to stalk them in the open plain. It is only in those parts of the steppe that abound in hillocks that a man can get within 300 yards, or sometimes, but rarely, within 200 yards, and even then he cannot be certain of his quarry. Granted that at 200 yards, with a good rifle, you are sure of your aim, on the other hand, your bullet does not kill unless it chance to hit the

head, heart, or lungs. In any other case the dzeren escapes, although perhaps mortally wounded, and is often lost to the hunter, for it runs faster with a broken leg than a good horse can gallop. For this sport you must have a rifle with a long point-blank range, because it is almost impossible to judge distances accurately in the steppe. You must have a rest for your rifle, such as the native sportsmen of Siberia use, otherwise you will be apt to find that, after having walked quickly for a considerable distance, your hand is shaky just when you want to take your aim! In fact on entering the deserts of Asia the sportsman must lay aside his European experiences and learn a great deal from the native hunters.

The Mongols, armed with their poor matchlocks, hunt the dzerens in the following way. In those parts of the steppe where antelope abound they dig small pits at certain distances apart. These holes at first excite mistrust, so the animals are left alone for some weeks to get used to them. The hunters then repair to their allotted stations, and conceal themselves in the pits, while others make a wide circuit to windward driving the herd towards the ambush, and no gun is fired till they are within a distance of fifty paces or even less. The drivers must know their business and be thoroughly familiar with the habits of the animal, otherwise their labour will be lost. They must never gallop suddenly up to the herd, because if they do the antelope almost always escape. The usual plan is to make a circuit

round the herd, slowly narrowing the circle with repeated halts, or else to ride on one flank at a foot's pace, gradually edging the herd towards the ambush.

The natives have another mode of hunting dzerens. A Mongol, mounted on a quiet and well-trained camel, rides over the steppe. On seeing antelope he dismounts, and leading his camel by the bridle quietly approaches the herd, concealing himself as much as possible by keeping step with the camel. At first the antelope are startled, but seeing only a camel quietly browsing, they allow the hunter to approach within a hundred paces, or even nearer. Towards the end of summer the dzerens are very fat, and are eagerly hunted by the Mongols for the sake of their delicate flesh, and also for their skins, which are made into winter clothing. The nomads, however, rarely wear the skins themselves, but sell them to Russian merchants at Urga or Kiakhta. Dzerens are also snared in traps made in the shape of a shoe, of tough grass (*dirisun*). When caught by the leg in one of these, the animal lames itself in its struggles to get free, and is unable to move.

The dzeren have even a more deadly enemy than man in the wolves. Whole herds, according to Mongol description, meet their death from these. And they are also subject at certain periods to epidemics, which, as I myself witnessed in the winter of 1871, commit great ravages among them.

It was on our way to Kalgan, some 230 miles from Urga, that we first saw the dzeren. I need not dwell on the impression produced by the first sight

of a herd of these antelope on myself and companion. We went after them day after day, to the extreme dissatisfaction of our Mongols, who had to wait hours for us, and at length became so discontented that we could only appease them by giving them a share of the spoil.

Notwithstanding the barrenness and desolate appearance of the Gobi, the road to Kalgan was kept amply alive by the tea-caravans which passed us by the dozen daily. I will presently describe one of these caravans, but now let us go back to the plateau of Mongolia.

After leaving the Khalka country, we passed through the land of the Sunni Mongols, and left behind the most barren part of the Gobi, entering a more fertile belt, which forms a fringe on the south-east, as a like belt does on the north, to the wild and barren centre of the plateau. The surface of the country now becomes more uneven, and is covered with excellent grass, on which the Chakhar Mongols pasture their numerous herds. These people are the frontier police of China Proper, having been enrolled in the government service, and divided into eight banners. Their country is about 130 miles in width, but its length from east to west is nearly three times as much.

Owing to their constant intercourse with the Chinese, the Chakhars of the present day have lost not only the character, but also the type, of pure Mongols. Preserving the native idleness of their past existence, they have adopted from the Chinese

only the worst features of their character, and are degenerate mongrels, without either the honesty of the Mongol or the industry of the Chinaman. The dress of the Chakhars is the same as that worn by the Chinese, whom they resemble in features, having generally a drawn or angular, rather than a flat or round face. This change of type is produced by frequent intermarriages between the Chakhar men and Chinese women; the offspring of this union of race is called *Erlidzi*. Other Mongols, particularly the Khalkas, detest them as much as they do the Chinese, and our drivers always kept watch at night while travelling through this country, because they said that all its inhabitants were the greatest thieves.

The Chakhar country is badly watered, but a few lakes may now and again be seen, the largest of which is Lake Anguli-nor. It is only when you get near the border of the plateau, and after you have passed some small streams, that the first signs of cultivation and settled life appear. The Chinese villages and cultivated fields plainly tell the traveller that he has at last left the wild desert behind him, and has entered a country more congenial to man.

At length, far away on the horizon, can be discerned the dim outlines of that range which forms so distinct a definition between the high chilly plateau of Mongolia and the warm plains of China Proper. This range is thoroughly Alpine. Steep hill-sides, deep valleys, lofty precipices, sharp peaks often crowned with overhanging rocks and an ap-

pearance of savage grandeur, are the chief characteristics of the mountains, along the axis of which is carried the Great Wall. Like many other ranges of Inner Asia, which have a lofty plateau on one side and low plains on the other, this presents no ascent from the side of the plateau. To the very last the traveller makes his way through undulating hills, until a marvellous panorama is suddenly disclosed to his view. Beneath his feet are rows upon rows of lofty mountains, precipices, chasms, and ravines, intermingled in the wildest confusion; beyond lie thickly populated valleys, through which glide winding rivers. The contrast between that which has been passed and that which lies before is wonderful. The change of climate is not less remarkable. Hitherto, during the whole of our march, frosts were of daily occurrence, sometimes exceeding $-34°$ Fahr., and always accompanied by strong north-west winds without snow. Now, as we descended, the temperature grew warmer at every step, and on arriving at Kalgan the weather was spring-like, although it was yet early in January; so marked was the change in a distance of about seventeen miles, separating this town from the commencement of the descent. The high land has a height of some 5,400 feet, whereas the town of Kalgan, at the entrance to the plains, is only 2,800 feet above the level of the sea.[1]

This town, called by the Chinese Chang-kia-kau, commands the pass through the Great Wall,

[1] Kalgan is derived from the Mongol word *Khalga*, i.e. a barrier.

and is an important place for the Chinese trade with Mongolia.[1] Kalgan numbers 70,000 inhabitants, who are entirely Chinese, but include a great many Mahomedans, known throughout China by the name of *Hwei Hwei*. Two Protestant missionaries, and several Russian merchants engaged in the tea-carrying trade, reside here. Notwithstanding the increased importation of tea by sea, and the consequent diminution of the land transport, 200,000 chests are still annually sent from Kalgan to Urga and Kiakhta, each weighing 108 lbs. This tea is brought to Kalgan from the plantations near Hankau,[2] partly by land and partly by steamers, to Tien-tsin; one-half is then delivered to Russian merchants for further transport, and the remainder is forwarded to Kiakhta or Urga[3] by the Chinese themselves. The Mongols are the carriers, and earn large sums from this business, which only lasts during the autumn, winter, and early spring (up to April). In summer all the camels are turned out to grass on the steppe, where they shed their coats and recruit their strength for fresh work.

The caravans of tea form a very characteristic feature in Eastern Mongolia. In early autumn, i.e. towards the middle of September, long strings of camels may be seen converging on Kalgan from all quarters, saddled, and ready to carry a burden of

[1] Russian cloth, plush and furs are also sent hither.

[2] This town is on the lower Yangtsze-Kiang, or Blue River; in it are the establishments of the Russians and other Europeans engaged in the tea-trade.

[3] Some of the tea is left here for the consumption of the Mongols.

four chests of tea (a little under 4 cwts.) on their backs across the desert. This is the usual load of a Mongol camel, but the stronger ones bear an additional fifth chest. The Mongols contract to carry tea either direct to Kiakhta or only to Urgà, beyond which place the mountains and frequent deep snows are formidable obstacles to the progress of camels. The tea is only transported in this manner as far as Urga; it is conveyed the rest of the way in two-wheeled bullock-carts.

The average cost of the transport of one chest from Kalgan to Kiakhta is equivalent to three lans (or taëls); each camel can therefore earn twelve lans (or about 3*l.* 10*s.*). The caravan generally accomplishes two journeys from Kalgan to Kiakhta during the winter, the owner earning about 7*l.* by each of his animals. Two drivers are usually placed in charge of twenty-five camels and their loads; the cost of transport is therefore very small, and the contractor realises a large profit, after deducting for losses by the death of camels from fatigue and starvation. The caravan camels are often rendered unfit for service by sore feet, lameness, or galled backs, occasioned by careless loading. If the lameness be caused by worn-out hoofs, the Mongols bind the animal, throw him on the ground, and sew a piece of leather over the injured hoof, which answers the purpose of a sole, and generally effects a cure; a sore-backed camel is unfit for further use that season, and is let loose on the steppe to recover. Taking into account the percentage of lost and damaged

camels, the owner of some dozens of these animals may gain a large profit; but many carriers have several hundred camels, and of course their earnings are proportionately greater. One would suppose that the Mongols would grow rich in this way, but in fact it is otherwise,—hardly one of them taking home a few hundred rubles, and almost all the money passes into the hands of the Chinese.

The latter impose upon the simple-minded Mongols in the most scandalous way. On the arrival of the autumn caravans, the Chinese ride out to meet them, and invite the owners to stay with them. Lodgings are given gratis, and every attention is shown. The unkempt Mongol, to whom the Chinese at any other time does not deign to speak, now lounges on the couches of his host, the rich merchant, who generally waits upon his guest in person, and anticipates his slightest wish. The Mongol accepts all this hospitality as genuine, and authorises his host to settle accounts for him with the merchant whose tea he contracts to carry. This is exactly what is required by the Chinaman. On receiving the money, always paid in advance, he swindles his client in the most unconscionable way, and then offers him first one and then another article, charging double price for all. Part of the money is then kept back for taxation and fees to officials, and more is expended on entertainment, until the Mongol takes his departure from Kalgan with a mere fraction left of his large earnings. Some of this, too, he is compelled to devote to religious uses,

so that he returns home in spring nearly empty-handed.[1]

The land transport is so expensive that the price of brick-tea, which is exclusively consumed by the Mongols and inhabitants of Siberia, is increased by three times the cost of its production. A caravan takes from thirty to forty days on the road from Kalgan to Kiakhta, according to agreement with the contractor.

The tea chests are first covered with thick woollen cloths, which are afterwards stripped off, and the boxes sewn up in undressed hides, and despatched to European Russia, on carts or on sledges, according to the season of the year. Kalgan, as we have said, commands one of the passes through the Great Wall, which we beheld for the first time. It is built of large stones, cemented together with mortar. The wall itself is tapering, 21 feet high, and about 28 feet wide at the foundation. At the most important points, less than a mile apart, square towers are erected, built of bricks laid in mortar, as headers and stretchers. The size of the towers varies considerably, the largest measuring 42 feet on each side at the base, and the same in height.

The wall winds over the crest of the dividing range, crossing the valleys at right angles, and blocking them with fortifications. At such places alone could this barrier be of any advantage for defensive

[1] See in Huc a clever description of the way in which the Mongol is swindled. Huc's 'Souvenirs d'un Voyage dans la Tartarie, le Thibet, et la Chine,' vol. i. 173.—Y.

purposes. The mountains, inaccessible by nature, are nevertheless crowned by a wall as formidable as that which bars the valleys.

What could have been the object of this gigantic work? How many millions of human hands must have laboured at it! What a vain expenditure of national strength! History records that this wall was built, upwards of two centuries before the birth of Christ, by the Chinese sovereigns, to protect their empire from the inroads of the neighbouring nomads; but we also read that the periodical irruptions of the barbarians were never checked by this artificial barrier, behind which China ever lacked, and even now lacks, that sure defence of a nation—moral strength.

The Great Wall, however, which the Chinese estimate to be about 3,300 miles long, and which is continued on one side into the heart of Manchuria, and on the other a long way beyond the upper course of the Yellow River, is very inferior in those parts more remote from Peking. Here it was built under the eyes of the Emperor and his chief officers of state, and is therefore a gigantic work; but in those distant localities, far removed from the supervision of the superior government, the celebrated Great Wall, which Europeans are wont to regard as a characteristic feature of China, is nothing but a dilapidated mud rampart, 21 feet high. The missionaries Huc and Gabet mention this fact[1] in the

[1] See Huc's 'Souvenirs d'un Voyage dans la Tartarie,' &c. Paris, 1850, vol. ii. p. 28.

description of their journey through Mongolia and Tibet; and we ourselves, in 1872, saw a wall of this kind on the borders of Ala-shan and Kan-su.

We passed five days at Kalgan, where we met with the greatest kindness from M. Matrenitsky and some others of our countrymen, who, in their mercantile capacity, manage the tea-carrying trade for the Russian firms at Hankau. Their residences are outside the town of Kalgan, near the entrance of the beautiful valley by which we descended: a situation which has the advantage of escaping the dirt and smells,—those inseparable adjuncts of every town in the Celestial Empire.

Like other foreigners in China, the Russians at Kalgan transact business through the medium of *compradors*, i.e. Chinese who are entrusted to conduct negotiations with their countrymen; but some of the Kalgan merchants know enough Chinese to do business for themselves, and others are brought into direct intercourse with the Mongol carriers. At Tien-tsin, however, and all the other ports of China open to Europeans, every mercantile house must have its compradors. They transact all the business, and rob their employers so outrageously that in a few years a comprador is generally able to set up a business establishment of his own.

The compradors living with foreigners learn to speak the language of their master, whatever may be his nationality. The Russian language is less easily acquired than any other, on account of the difficulty of pronouncing the words and mastering

the construction of the sentences. '*Quickly thy master shoots*,' once said a comprador at Kalgan to me on seeing me shoot rock-pigeons on the wing. '*Thy food will not will?*' enquired the same individual, offering me at the same time something to eat. We met several such grammarians at Urga. One of them had the reputation of having formerly manufactured false Russian bank-notes, which he circulated among the Mongols. On asking him if he still continued this occupation, he replied: '*How is that possible now thy paper bad is? write write*—(i.e. the text on the bank-note)—*few few our people do can, but the face* (i.e. the portrait) *very wonderful is*.' The Mongols, however, are not particular about the artistic merit of the bank-note; and we saw several false notes at Urga, the portraits on which were simply drawn by hand.

Another comprador thus expressed his opinion to me of foreigners residing in China: 'Thy people same as Pehling-Fanqui[1] not; thy people our people odali[2] good; Pehling-Fanqui bad are.' I could not help being flattered at hearing such praise from a Chinaman, who thus assured me 'that we were not at all like the French and English, but the same as the Chinese who good are.'

However, this opinion, which may have been only that of the individual, does not free the Russian from the general hatred which the Chinese entertain

[1] Pehling is the Chinese for Englishmen; Fanqui for Frenchmen.
[2] *Odali* means 'same as' in the dialect of Trans-Baikalia.

for all Europeans, and from the nickname applied to all of us of *Yang-kwei-tsz*, i.e. 'foreign devil.'

The European will hear himself called by no other name; and on our first entrance into China Proper we experienced all the miseries which await the traveller from the West within the limits of the Celestial Empire. But of this later. I will now continue my narrative.

With the assistance of our countrymen at Kalgan we hired two riding-horses for the journey to Peking, and some mules for the baggage. Europeans usually travel in litters carried between two mules, but we preferred riding, because we could see the country better in this way than in closed litters.

The distance from Kalgan to Peking is about 140 miles, usually performed in four days. Several halts are made on the road at inns, most of which are kept by Mahomedan emigrants from Eastern Turkestan. Good inns are very difficult of access for the European, who is shown into mean caravanserais, where he is charged double, triple, and even ten times the usual price. But after sitting for six or seven consecutive hours in the saddle, chilled with the night air, one is glad of any shelter. In spite of the well-known liberality of Europeans, such is the hatred to the 'foreign devils' that we were sometimes refused a night's lodging, notwithstanding the intervention of our Chinese mule-drivers. This befell us at the town of Sha-chang, where we were obliged to ride for an hour from one inn to another, offering ten times the usual charge, before obtaining shelter in a dirty, cold room.

Our ignorance of the language was another great hindrance to us, especially at the stations where we wanted something to eat. Fortunately, I had written down at Kalgan the names of some Chinese dishes which served as our *menu* to Peking. I do not know how others may like the taste of Chinese cookery, with its flavour of sesamum oil and garlic; but, as for us, the messes in the inns were simply disgusting—the more so because we saw haunches of asses' meat in the butchers' shops, and always had well-grounded suspicions that we were fed on the same. The Chinese themselves show no repugnance to any kind of nastiness, and will even eat dogs' flesh. On our second visit to Kalgan we saw some Chinese butchers buy a camel suffering from the mange so badly that its whole body was one mass of sores, and then and there cut it up and sell the meat. Any animal that has died is eaten, as a matter of course, and the asses sold in the meat shops have never come by their death in a violent manner, for such is the meanness of this people that they will never willingly kill a beast of burden for the sake of its meat, if it has any work left in it. The reader can now form an idea of the relish with which Europeans, fully aware of the coarse gastronomical tastes of their hosts, partake of the dishes served in Chinese inns.

On leaving Kalgan, and turning his back on the border range, a wide, thickly-populated, and highly cultivated plain lies before the traveller. The cleanly appearance of the villages affords a striking contrast to the towns. The road is very animated;

—strings of asses laden with coal, mule-carts, litter-bearers, and scavengers pass along. In all the villages and towns full-grown men may be seen all day long on the roads, with a basket in one hand and a spade in the other, collecting animal dung, which is used for manuring the fields and for fuel.

Twenty miles from Kalgan, on the edge of the plain, stands the large town of Siuen-hwa-fu, surrounded, like all the Chinese towns, with a battlemented mud wall, like the Kitai-gorod at Moscow. After leaving it, the road enters the mountains, following a gorge through which flows the rapid and wide stream of the Yang-ho. In the narrower and more intricate parts of the defile the road is hewn out of the rocks, and it is altogether well adapted for wheeled conveyances. After passing the town of Tsi-ming, we again enter a plain, about nine miles wide, extending towards the west between two chains of mountains, one of which we have just crossed; the other, higher and far grander, forms the outer barrier of the second descent by which the table-land of Eastern Asia subsides into the plain which extends eastward to the Yellow Sea.

The elevation of the country between Kalgan and Chadau, which stands at the entrance to the last range of mountains, is very even, and the journey is continued over high land.[1] At Chadau the descent of the second range, called Si-shan by the Chinese, begins. Like the Kalgan mountains, this

[1] Kalgan is 2,800 feet, Chadau (Chatow or Chatao of our maps) 1,600 feet, above the sea.

range is only developed fully on the further side, i.e. towards the plain at its base.

The road follows the pass of Gwan-kau the whole way from Chadau as far as the town of Nan-kau, situated at the egress from the mountains. The pass is only 70 to 80 feet wide at first, and is shut in by stupendous rocks of granite, porphyry, grey marble, and silicious slate. The road was once paved with stone-flags, but is now completely out of repair, and almost impassable for equestrians, although the Chinese drive their two-wheeled carts over it, as well as caravans of camels, laden with tea.

Along the crest of this range is built the second, so-called inner, Great Wall, far greater and more massively built than that of Kalgan. It is composed of great slabs of granite, with brick battlements on the summit; the loftiest points are crowned with watch-towers. Beyond it are three other walls, about two miles apart, all probably connected with the main barrier. These walls block the pass of Gwan-kau with double gates, but the last of all in the direction of Peking has triple gates. Here may be noticed two old cannon, said to have been cast for the Chinese by the Jesuits.

Immediately after passing through, the defile widens, although its wild, weird appearance continues for some distance further. Mountain torrents and cascades rush noisily down the rocks, and at the foot of overhanging cliffs Chinese houses appear everywhere, with their vineyards and small orchards of fruit-trees. At length the traveller arrives at the

town of Nan-kau, 1,000 feet below Chadau, from which it is only fifteen miles distant.

Thus the entire width of the border of the plateau, from the summit of the descent above Kalgan to the entrance into the plain of Peking at Nan-kau, is about 130 miles. Towards the west it probably widens, dividing into a number of parallel chains, abutting on the northern bend of the Hoang-ho, while to the east the distinct ranges unite in one broad belt of mountains, which continues to the Gulf of Pechihli in the Yellow Sea.

Peking[1] is only one day's journey, i.e. about 35 miles, from Nan-kau. The country is a plain, hardly above the sea level, with an alluvial soil, consisting of clay and sand, highly cultivated in all parts. The frequent villages, groves of cypress, tree-juniper, pine, poplar, and other trees marking the burial-places, lend variety and beauty to the landscape. The climate is warm; at a season when in Russia severe frosts are prevalent, the thermometer here at noon rises many degrees above freezing point in the shade. Snow is rare; if it fall occasionally at night, it generally thaws the next day. Wintering birds abound, and we saw thrushes, mountain finches, greenfinches, bustard, rooks, kites, pigeons, and wild ducks.

Nearer to Peking the population is so dense that villages grow into towns, through which the traveller is unconsciously approaching the wall of the city, until at last he finds himself to have entered the far-famed capital of the East.

[1] Peking is only 120 feet above the sea level.

CHAPTER II.

THE MONGOLS.

The Mongols—Physical characteristics—Modification of character on the Chinese border—Pigtail introduced—Costume—The *Yurta* or Felt Tent—Uncleanliness—Tea-drinking—Food and beverages—Gluttony—Animal food—Cattle—Importance of their herds—Indolent habits—Physical capabilities and defects—Cowardice—Sagacity and obtuseness—Curiosity—Points of the compass—Estimation of distance—Calendar and Year-Cycle—Language and diversities—Literature—Love of gossip—Songs—Mongol women—Marriage customs and domestic relations—Hospitality and polite customs—Freedom of manners—Lamaism—Religious service '*Om mani padmi hom*'—The Dalai Lama—Pilgrimages—The Clergy—Monasticism—Superstitions—Masses for the dead—The Author's view of Missions—Administrative organisation of the Mongol tribes—Grades of rank among chiefs, and their salaries—Population—Laws, punishment, and taxation—Military force—Decay of martial spirit.

THE present chapter is specially devoted to the Ethnology of Mongolia, in order that in continuing the narrative of our journey, anecdotes relating to the inhabitants may be mentioned incidentally and not dwelt on in detail. In describing the physical geography and nature of the country we visited, and the various episodes of our wanderings, the most noticeable traits of its inhabitants might have been scattered here and there through the volume, and thus have escaped the attention of the reader. To avoid this, I resolved to devote an entire chapter to a description of the people of Mongolia and the peculiar characteristics of their nomad life, merely making casual

mention of them afterwards. Let us begin with their external appearance, taking as our model the inhabitants of the Khalkas country, where the purity of the Mongol race is best preserved.

A broad flat face, with high cheek-bones, wide nostrils, small narrow eyes, large prominent ears, coarse black hair, scanty whiskers and beard, a dark sunburnt complexion, and, lastly, a stout thick-set figure, rather above the average height: such are the distinguishing features of this race. In other parts of Mongolia, but especially on the south-east, where for some distance it borders with China Proper, the original type is much less distinct; and, although the nomâds reconcile themselves with difficulty to a settled life, still in some way their neighbours have exercised such influence over them that in those districts lying immediately outside the Great Wall they have almost become Chinese. With few exceptions, the Chinese Mongol still dwells in his *yurta* or felt tent, tending his herds; but in appearance and still more in character he is a decided contrast to his northern brethren, and bears a close resemblance to his adopted countrymen. He follows their fashions in his dress and domestic habits; and, owing to frequent intermarriages with their women, his coarse flat features are cast in the more regular mould of the Chinese face. His very character has undergone a remarkable change; the desert has become distasteful to him, and he prefers the populous towns of China, where he has learnt the advantages and pleasures of a more civilised existence. But, in thus gradually departing from his former life, the Chinese

Mongol adopts only the worst qualities of his neighbour, retaining his own inherent vices, until he has become a degenerate mongrel, demoralised, instead of rising to a higher social grade, under Chinese influence.

The Mongols, like the Chinese, shave the head, only leaving sufficient hair on the crown to plait into a long tail behind, whilst the heads of their lamas are left entirely bare.[1] Whiskers and beard, naturally of scanty growth, are worn by none.

The pigtail was introduced into China by the Manchus, after their conquest of the Celestial Empire about the middle of the seventeenth century. Since then it has been considered an external mark of submission to the reigning (Ta-tsin) dynasty, and all Chinese subjects are compelled to wear it.

The Mongol women allow the hair to grow, and plait it in two braids, decorated with ribbons, strings of coral, or glass beads, which hang down on either side of the bosom. Silver brooches, set with red coral, which is highly esteemed in Mongolia, are fastened in the hair. The poorer women substitute common beads for coral, but the brooches, which are secured above the forehead, are generally of silver, or as a rare exception, of brass. Large silver earrings and bracelets are also customary.

The dress of the Mongols consists of a kaftan or long robe made of blue daba,[2] Chinese boots, and

[1] They use Chinese knives in shaving, and soften the hair with warm water.

[2] Chinese cotton stuff.

a wide hat turned up at the brim. Shirts or under-clothing of any kind are unusual; warm trousers, sheepskin cloaks, and fur caps are worn in winter. In summer the dress, consisting of Chinese silk, is sometimes more elaborate; the robe or fur cloak is always fastened round the waist with a belt, to which are attached those invariable appendages of every Mongol, a tobacco pouch, pipe, and tinder-box. Besides these, the Khalka people carry a snuff-box, which they offer on first meeting an acquaintance. But the pride of the Mongol lies in the trappings of his horse, which are thickly set with silver.

The dress of the women differs from that of the men; their upper garment is a short sleeveless jacket without a belt. The dress, however, of the fair sex, and style of wearing the hair, varies in different parts of Mongolia.

The universal habitation of the Mongol is the felt tent or yurta, which is of one shape throughout the country. It is round, with a convex roof, through an opening in which smoke escapes and light is admitted. The sides are of wooden laths,[1] fastened together in such a way that, when extended, they resemble a lattice with meshes a foot square. This frame-work is in several lengths, which, when the yurta is pitched, are secured with rope, leaving room on one side for a wooden door three feet high, and about the same in width. The size of these dwellings varies, but the usual dimensions are from 12 to 15 feet

[1] The wood required for yurtas is mostly brought from the Khalka country, which abounds in forests.

THE YURTA, OR FELT TENT

An eminent Central Asian traveller says of the Yurta that, to the unaccustomed eye, it may easily be mistaken for a lump of earth. The first living creatures you see on approaching are the camels, pasturing on the saline and apparently barren plain, or a flock of sheep dotted over the ground like stones, and beyond these horses and cattle.

On the horizon you may remark some strange-looking figures, perched high on their squat little horses, galloping to and fro, or moving along more le surely. As you come nearer you notice that these horsemen wear great conical fur caps, that they ride with short stirrups, and that their features are of the Mongol type.

in diameter, and about 10 feet high in the centre. The roof is formed of light poles attached to the sides and doorway by loops, the other ends being stuck into a hoop, which is raised over the centre, leaving an aperture 3 to 4 feet in diameter, which answers the double purpose of chimney and window.

When all is made fast, sheets of felt, of double thickness in winter, are drawn over the sides and door and round the chimney, and the habitation is ready. The hearth stands in the centre of the interior; facing the entrance are ranged the burkhans (gods), and on either side are the various domestic utensils. Round the hearth, where a fire is kept burning all day, felt is laid down; and in the yurtas of the wealthier classes even carpets for sitting and sleeping on. In these, too, the walls are lined with cotton or silk, and the floors are of wood.

This habitation is indispensable to the wild life of the nomad; it is quickly taken to pieces and removed from place to place, whilst it is an effectual protection against cold and bad weather. In the severest frost the temperature round the hearth is comfortable. At night the fire is put out, the felt covering drawn over the chimney, and even then, although not warm, the felt yurta is far more snug than an ordinary tent. In summer the felt is a good non-conductor of heat, and proof against the heaviest rain.

The first thing which strikes the traveller in the life of the Mongol is his excessive dirtiness: he never washes his body, and very seldom his face and hands. Owing to constant dirt, his clothing

swarms with parasites, which he amuses himself by killing in the most unceremonious way. It is a common sight to see a Mongol, even an official or lama of high rank, in the midst of a large circle of his acquaintances, open his sheepskin or kaftan to catch an offending insect and execute him on the spot between his front teeth. The uncleanliness and dirt amidst which they live is partly attributable to their dislike, almost amounting to dread, of water or damp. Nothing will induce a Mongol to cross the smallest marsh where he might possibly wet his feet, and he carefully avoids pitching his yurta anywhere near damp ground or in the vicinity of a spring, stream, or marsh. Moisture is as fatal to him as it is to the camel, so that it would seem as if his organism, like the camel's, were only adapted to a dry climate; he never drinks cold water, but always prefers brick-tea, a staple article of consumption with all the Asiatic nomads. It is procured from the Chinese, and the Mongols are so passionately fond of it that neither men nor women can do without it for many days. From morning till night the kettle is simmering on the hearth, and all members of the family constantly have recourse to it. It is the first refreshment offered to a guest. The mode of preparation is disgusting; the vessel[1] in which the tea is boiled is never cleansed, and is

[1] Their domestic utensils are anything but numerous. They are—an iron saucepan, for boiling their food in, teapot, a skimmer, a leathern skin or wooden tub to hold water or milk, a wooden trough for serving the meat in. To these must be added an iron fire-dog, tongs to hold the argols, and occasionally a Chinese axe.

occasionally scrubbed with argols, i.e. dried horse or cow dung. Salt water is generally used, but, if unobtainable, salt is added. The tea is then pared off with a knife or pounded in a mortar, and a handful of it thrown into the boiling water, to which a few cups of milk are added. To soften the brick-tea, which is sometimes as hard as a rock, it is placed for a few minutes among hot argols, which impart a flavour and aroma to the whole beverage. This is the first process, and in this form it answers the same purpose as chocolate or coffee with us. For a more substantial meal the Mongol mixes dry roasted millet in his cup, and, as a final relish, adds a lump of butter or raw sheep-tail fat (kurdiuk). The reader may now imagine what a revolting compound of nastiness is produced, and yet they consume any quantity of it! Ten to fifteen large cupfuls is the daily allowance for a girl, but full-grown men take twice as much.[1] It should be mentioned that the cups, which are sometimes highly ornamented, are the exclusive property of each individual; they are never washed, but after every meal licked out by the owner; those belonging to the more wealthy Mongols are of pure silver, of Chinese manufacture; the lamas make them of human skulls cut in half, and mounted in silver. The food of the Mongols also consists of milk prepared in various ways, either as butter, curds, whey, or kumiss. The curds are made from the unskimmed milk, which is

[1] Mongols have no regular hours for meals: they eat and drink whenever they feel disposed, or have the opportunity.

gently simmered over a slow fire, and then allowed to stand for some time, after which the thick cream is skimmed off and dried, and roasted millet often added to it. The whey is prepared from sour skimmed milk, and is made into small dry lumps of cheese. Lastly, the kumiss (*tarasum*),[1] is prepared from mares' or sheep's milk; all through the summer it is considered the greatest luxury, and Mongols are in the habit of constantly riding to visit their friends and taste the tarasum till they generally become intoxicated. They are all inclined to indulge too freely, although drunkenness is not so rife among them as it is in some more civilised countries. They buy brandy from the Chinese when they themselves visit China with their caravans, or from itinerant Chinese merchants, who in summer visit all parts of Mongolia, exchanging their wares for wool, skins, and cattle. This trade is very profitable to the latter, as they generally sell their goods on credit, charging exorbitant interest, and receiving payment in kind, reckoned at prices far below the real value.

Tea and milk constitute the chief food of the Mongols all the year round, but they are equally fond of mutton. The highest praise they can bestow on any food is to say that it is 'as good as mutton.' Sheep, like camels, are sacred; indeed all their domestic animals are emblems of some good qualities. The favourite part is the tail which is pure fat. In autumn, when the grass is of the poorest description, the sheep fatten wonderfully, and the fatter the

[1] See Supplementary Note.

better for Mongol taste.[1] No part of the slaughtered animal is wasted, but everything is eaten up with the utmost relish.

The gluttony of this people exceeds all description. A Mongol will eat more than ten pounds of meat at one sitting, but some have been known to devour an average-sized sheep in the course of twenty-four hours! On a journey, when provisions are economised, a leg of mutton is the ordinary daily ration for one man, and although he can live for days without food, yet, when once he gets it, he will eat enough for seven.

They always boil their mutton, only roasting the breast as a delicacy. On a winter's journey, when the frozen meat requires extra time for cooking, they eat it half raw, slicing off pieces from the surface, and returning it again to the pot. When travelling and pressed for time, they take a piece of mutton and place it on the back of the camel, underneath the saddle, to preserve it from the frost, whence it is brought out during the journey and eaten, covered with camel's hair and reeking with sweat; but this is no test of a Mongol's appetite. Of the liquor in which he has boiled his meat he makes soup by adding millet or dough, drinking it like tea. Before eating, the lamas and the more religious among the laity, after filling their cups, throw a little into the fire or on the ground, as an offering; before drink-

[1] They have a remarkable way of killing their sheep: they slit up the creature's stomach, thrust their hand in, and seize hold of the heart, squeezing it till the animal dies.

ing, they dip the middle finger of the right hand into the cup and flick off the adhering drops.[1]

They eat with their fingers, which are always disgustingly dirty; raising a large piece of meat and seizing it in their teeth, they cut off with a knife, close to the mouth, the portion remaining in the hand. The bones are licked clean, and sometimes cracked for the sake of the marrow; the shoulder-blade of mutton is always broken and thrown aside, it being considered unlucky to leave it unbroken.

On special occasions they eat the flesh of goats and horses; beef rarely, and camels' flesh more rarely still. The lamas will touch none of this meat, but have no objection to carrion, particularly if the dead animal is at all fat. They do not habitually eat bread, but they will not refuse Chinese loaves, and sometimes bake wheaten cakes themselves. Near the Russian frontier they will even eat black bread, but further in the interior they do not know what it is, and those to whom we gave rusks, made of rye-flour, to taste, remarked that there was nothing nice about such food as that, which only jarred the teeth.

Fowl or fish they consider unclean, and their dislike to them is so great that one of our guides nearly turned sick on seeing us eat boiled duck at Koko-nor; this shows how relative are the ideas of people even in matters which apparently concern the senses. The very Mongol, born and bred amid

[1] This is one of the ancient Mongol practices. See 'Marco Polo,' 2nd ed., i. p. 300.—V.

frightful squalor, who could relish carrion, shuddered when he saw us eat duck *à l'Européenne.*

Their only occupation and source of wealth is cattle-breeding, and their riches are counted by the number of their live stock, sheep, horses, camels, oxen, and a few goats—the proportion varying in different parts of Mongolia.[1] Thus, the best camels are bred among the Khalkas; the Chakhar country is famous for its horses, Ala-shan for its goats; and in Koko-nor the yak is a substitute for the cow.

The Khalka country ranks first in the wealth of its inhabitants, who are mostly well off; even after the cattle-plague had destroyed countless oxen and sheep, large herds were still owned by individuals, and there is hardly a native but possesses some hundred of the fat-tailed sheep. In Southern Mongolia, i.e. in Ordos and Ala-shan, the sheep are of a different breed, and at Koko-nor they have yet another kind with horns eighteen inches long. As all the requirements of life: milk and meat for food, skins for clothing, wool for felt, and ropes, are supplied by his cattle, which also earn him large sums by their sale, or by the transport of merchandise, so the nomad lives entirely for them. His personal wants, and those of his family, are a secondary consideration. His movements from place to place depend on

[1] The price of cattle varies in different parts of the country thus:

	In Khalka country.	In the Chakhar country.	In Koko-nor.	
Sheep	2 to 3	2 to 3	1 to 1½	Chinese lans = 5*s.* 6*d.* per head.
Oxen	12 „ 15	15	7 „ 10	
Camels	30 „ 35	40	25	
Horses	12 „ 15	15	25	

the wants of his animals. If they are well supplied with food and water, the Mongol is content. His skill and patience in managing them are admirable. The stubborn camel becomes his docile carrier; the half-tamed steppe-horse his obedient and faithful steed. He loves and cherishes his animals; nothing will induce him to saddle a camel or a horse under a certain age; no money will buy his lambs or calves, which he considers it wrong to kill before they are full-grown. Cattle-breeding is the only occupation of this people; their industrial employment is limited to the preparation of a few articles for domestic use, such as skins, felt. saddles, bridles, and bows; a little tinder, and a few knives. They buy everything else, including their clothes, of the Chinese, and, in very small quantities, from the Russian merchants at Kiakhta and Urga. Mining is unknown to them. The inland trade is entirely one of barter; and the foreign trade is confined to Peking and the nearest towns of China, whither they drive their cattle for sale, and carry salt, hides, and wool to exchange for manufactured goods.

The most striking trait in their character is sloth. Their whole lives are passed in holiday making, which harmonizes with their pastoral pursuits. Their cattle are their only care, and even they do not cause them much trouble. The camels and horses graze on the steppe without any watch, only requiring to be watered once a day in summer at the neighbouring well. The women and children tend the flocks and herds. The rich hire shepherds, who are mostly

poor homeless vagrants. Milking the cows, churning butter, preparing the meals, and other domestic work, falls to the lot of the women. The men, as a rule, do nothing but gallop about all day long from yurta to yurta, drinking tea or kumiss, and gossiping with their neighbours. They are ardent lovers of the chase, which is some break to the tedious monotony of their lives, but they are, with few exceptions, bad shots, and their arms are most inferior, some having flint-and-steel muskets, while others have nothing but the bow and arrows. An occasional pilgrimage to some temple, and horse-racing, are their favourite diversions.

With the approach of autumn the Mongols throw off some of their laziness. The camels, which have been at pasture all the summer, are now collected together and driven to Kalgan or Kuku-Khoto[1] to prepare for the transport of tea and merchandise to and from Kiakhta, and to carry supplies from Kuku-Khoto to the Chinese forces stationed between Uliassutai and Kobdo. Some few are employed in carrying salt from the salt lakes of Mongolia to the nearest towns of China Proper. In this way, during the autumn and winter, all the camels of Northern and Eastern Mongolia are earning large profits for their owners. With the return of April, the transport ceases, the wearied animals are turned loose on the steppe, and their masters repose in complete idleness for five or six months.

The Mongol is so indolent that he will never

[1] Kwei-hwa-cheng.

walk any distance, no matter how short, if he can ride; his horse is always tethered outside the yurta, ready for use at any moment; he herds his cattle on horseback, and when on a caravan journey nothing but intense cold will oblige him to dismount and warm his limbs by walking a mile or two. His legs are bowed by constant equestrianism, and he grasps the saddle like a centaur. The wildest steppe-horse cannot unseat its Mongol rider. He is in his element on horseback, going at full speed; seldom at a foot's pace, or at a trot, but scouring like the wind across the desert. He loves and understands horses; a fast galloper or a good ambler is his greatest delight, and he will not part with such a treasure, even in his direst need. His contempt for pedestrianism is so great that he considers it beneath his dignity to walk even as far as the next yurta.

Endowed by nature with a strong constitution, and trained from early childhood to endure hardships, the Mongols enjoy excellent health, notwithstanding all the discomforts of life in the desert. In the depth of winter, for a month at a time, they accompany the tea-caravans. Day by day the thermometer registers upwards of $-20°$ of Fahrenheit, with a constant wind from the north-west, intensifying the cold until it is almost unendurable. But in spite of it they keep their seat on their camels for fifteen hours at a stretch, with a keen wind blowing in their teeth. A man must be made of iron to stand this; but a Mongol performs the journey backwards and forwards four times during the

winter, making upwards of 3,000 miles. As soon as you set him to do other work, apparently much lighter, but to which he is unaccustomed, the result is very different. Although as hard as nails, he cannot walk fifteen or twenty miles without suffering great fatigue; if he pass the night on the damp ground he will catch cold as easily as any fine gentleman, and, deprived of his brick-tea, he will never cease grumbling.

The Mongol is a slave to habit. He has no energy to meet and overcome difficulties; he will try and avoid, but never conquer them. He wants the elastic, manly spirit of the European, ready for any emergency, and willing to struggle against adversity and gain the victory in the end. His is the stolid conservatism of the Asiatic, passive, apathetic and lifeless.

Cowardice is another striking trait of their character. Leaving out of the question the Chinese Mongols, whose martial spirit and energy has been completely stamped out, the Khalka people are vastly inferior to their ancestors of the times of Chinghiz and Okkodai.[1] Two centuries of Chinese sway,[2] during which their warlike disposition has been systematically extinguished and suffered to stagnate in the dull round of nomad existence, have

[1] Okkodai, the third son and successor of Chinghiz-Khan, established his capital at Karakorum, and founded the walls and palace in 1234. See 'Marco Polo,' 2nd ed., i. p. 228.—M.

[2] That is to say, from the time when the Khalkas became subject to China in 1691, during the reign of Kanghi. Western Mongolia, the so-called Dzungaria, was conquered by the Chinese in 1756.

robbed them of every trace of prowess and bravery. The recent incursions of the Dungans into their territory proved how degenerate they had become. The very name of *Hwei, Hwei*, i.e. Mussulmans, created a panic and caused them to fly ignominiously without offering the least resistance to their foes. And yet every advantage was on their side; they were in their own country, and were of course well acquainted with the localities—a matter of some importance in warfare, particularly in an arid desert like the Gobi; they could always outnumber the Dungans, who were badly armed and undisciplined. But, despite all this, the latter ravaged Ordos and Ala-shan, captured Uliassutai and Kobdo, although defended by Chinese regulars, invaded the Khalka country several times, and would have taken Urga had it not been for the presence of some Russian soldiers.

We cannot deny that, besides cunning, dissimulation and deceit,—qualities especially prevalent among the natives of the border-land of China,—the Mongols exhibit great sagacity. Among those of pure blood immorality is chiefly confined to the lamas; the common people, or, as they are called, the *Kara-Kung*, i.e. black folk, when uncontaminated by Chinese or lama teaching, are kind and simple-minded. But even their sagacity is very one-sided. The intimate knowledge they have of their native plains excites one's admiration; they will extricate themselves from the most desperate situation, foretell rain, storms, and other atmospheric changes;

follow the almost imperceptible tracks of a stray horse or camel, and are sensible of the proximity of a well; but when you try and explain to them the simplest thing which does not come within their daily routine, they will listen with staring eyes and repeat the same question without understanding your answer. The obtuseness of the Mongol is enough to exhaust one's patience; you are no longer talking to the same man you knew in his native state, you have now to do with a child, full of curiosity, but incapable of understanding what you tell him. Their inquisitiveness is often carried to an excess. When the caravan enters a populous district, the inhabitants appear from all sides, some of them from a distance, and after the usual salutation, '*mendu*,' i.e. 'How do you do?' they begin asking you 'Whither are you travelling?' 'What is the object of your journey?' 'Have you nothing to sell?' 'Where did you buy your camels?' and 'How much did you pay for them?' and so on. No sooner is one gone than another takes his place; sometimes a troop rides up, always with the same questions. At the halting-place your patience is sorely taxed. Hardly are the camels unloaded before they are upon you, examining and handling your property, and even entering your tent. The smallest article excites their curiosity; your arms, of course, but even such trifling objects as boots, scissors, padlocks, are all handled in turn, and they all ask you to give them first one thing, then another. There is no end to it. Every new-comer begins afresh, and the pre-

vious visitors explain and show him all your possessions, and, if they get the chance, make off with something by way of a keepsake.

One of their peculiarities cannot fail to arrest the attention of the stranger, and that is, their habit of moving from place to place without ever using the words *right* or *left*, as though the ideas they express were unknown to them. Even in the yurta a Mongol will never say *to the right hand* or *to the left*, but always such or such a thing is *east* or *west* of him. It may be worth mentioning here that the points of their compass are the reverse of ours; their north is our south, and therefore the east is on the left, not on the right, of their horizon.[1]

They calculate distances by the time occupied in travelling with camels or horses, and have no other accurate scale of measurement. If you ask how far it is to any given place, the answer is always so many days' journey with camels, or so many days' ride on horseback. But as the rate of travelling and length of marches vary according to circumstances and the disposition of the rider, they never fail to add 'if you ride well,' or 'if you travel slowly.' A day's journey in Khalkas is twenty-eight miles with camels, and from forty to forty-seven on horses. About Koko-nor they travel more slowly with the former, not over twenty miles a day. A good camel will average about three miles an hour with a load on its back, or four without one.

The unit in the Mongol's scale of distances is a

[1] See Supplementary Note.

day and a night; he has no idea of dividing them into hours. Their almanac is the same as the Chinese, and is printed at Peking in Mongol characters. The months are all lunar, some containing twenty-nine, others thirty days. Hence there is a week over every year to complete the revolution of the earth in its solar orbit. Every fourth year the extra weeks make a month, which is added to the winter, summer, or one of the other seasons, according to the calculations of the Peking astronomers.[1] This month has no special name, but is called after one of the others, so that in Leap-year there are two Januaries or two Julys, &c. The new year commences on the first day of the white month, *Tsagan Sar*, corresponding with the middle of February; which marks the beginning of spring, and is kept as a great holiday in all Buddhist countries. The 1st, 8th, and 15th days of every month are also festivals, and are also called *Tserting*.[2]

Their cycle is twelve years, each year having the name of some animal, thus :—

The 1st year *Kuluguna* (mouse).	The 7th year *Mori* (horse).
„ 2nd „ *Ukyr* (cow).	„ 8th „ *Honi* (sheep).
„ 3rd „ *Bar* (tiger).	„ 9th „ *Meehit* (monkey).
„ 4th „ *Tolai* (hare).	„ 10th „ *Takia* (fowl).
„ 5th „ *Lu.*(dragon).	„ 11th „ *Nohoi* (dog).
„ 6th „ *Mogo* (serpent).	„ 12th „ *Hakhai* (pig).

Five of these cycles make a larger one, answering to

[1] See Supplementary Note.

[2] On the New Year's Day, or White Feast of the Mongols, see 'Marco Polo,' 2nd. ed. i. p. 376–378, and ii. p. 543. The monthly festival days, properly for the Lamas days of *fasting* and worship, seem to differ locally. See note in same work, i. p. 224, and on the Year-cycle, i. p. 435.—Y.

our century. A man's age is computed by the lesser cycles; thus, if you are twenty-eight you are said to be in the year of the hare, i.e. two complete cycles of twelve years in each have elapsed since your birth, and you have entered the fourth year of your third cycle.

With regard to the language, I must confess that, with the multifarious occupations of the expedition, and in the absence of a good dragoman, we were unable to study it closely, or pay much attention to the different dialects. This was a serious omission, but it was chiefly caused by our want of funds; if we had been able to dispose of ample means, I could have hired a good interpreter thoroughly conversant with his business; but circumstanced as we were, ours could not spare a minute for days together for his proper duties; and his limited intelligence made him of very little use on occasions when tact and address were required.

The Mongolian language prevails throughout the country. It is rich in words, and has several forms and dialects, which, however, are not very distinct, except as between Northern and Southern Mongolia, where the difference is strongly marked.[1] Words in use among Southern Mongols are perfectly

[1] Thus—

Among Khalkas.		In Ala-shan.	Among Khalkas.		In Ala-shan.
Night	is Shuni	. . Su	Khalat (Tunic)	is Zupsa	Labishik
Sheep	„ Honi	. . Hoi	Bowl	is Imbu	. Haisa
Evening	„ Udishi	. . Ashin	Cloth	„ Tsimbu	. Dahar
Teapot	„ Shahu	. . Debir	Gunpowder	„ Dari	. Shoroi
Boots	„ Gutul	. . Gudusu	Milk	„ Su	. . Yusu
Meat	„ Mahan	. . Ideh	Hither	„ Nasha	. Naran
Cloak	„ Dehl	. . Dibil	Thither	„ In-shi	. Tigehi

unintelligible to the Khalkas, and the pronunciation of the former is softer; thus, *k*, *ts*, *ch*, become respectively *kh*, *ch*, and *g*, e.g. *Tsagan* (white), becomes *Chagan*, Kuku-hoto becomes khuhu-khoto, and so on.

Even the construction of the sentence changes, and our interpreter sometimes could not understand expressions used by the Mongols of the South, although he could not explain why they were unintelligible. All he would say was, 'They talk nonsense.'

It appears to me that very few Chinese words have been introduced into the Mongol language, but that in the neighbourhood of Koko-nor a great deal is derived from the Tangutan. In South-Eastern and Southern Mongolia, Chinese influence prevails, and is evidenced in the character of the people as well as in their language, not so much from the number of foreign words introduced into it as by a general change, and a more monotonous and phlegmatic pronunciation than that of the true Khalka Mongols, who talk in loud, energetic accents.

The written characters, like the Chinese, are arranged in vertical columns, but are read from left to right.[1] There are a good many printed books, the Chinese Government having appointed a special commission, at the end of the last century, to trans-

[1] The present Mongol letters were acquired in the thirteenth century of our era, in the reign of Kublai-Khan. [See Supplementary Note.]

late into Mongol historical, educational, and religious works. The numerals are also peculiar to the people, and are used in business transactions equally with the Manchu. There are schools at Peking and Kalgan for teaching the language, and an almanac and some books are from time to time printed in it. The lettered classes are the princes, nobles, and lamas, the latter also learning Tibetan, the princes and nobles Mongol and Manchu. The common people are in general illiterate. All Mongols are fond of talking. Their greatest pleasure is to sit and chat over a cup of tea. On meeting them, their first question is, 'What's the news?' and they will ride twenty or thirty miles to communicate some bit of gossip to a friend. In this way rumours fly through the country with astounding celerity, almost equal to the telegraph. During our journey, the inhabitants, hundreds of miles ahead of us, knew all about us, down to the smallest details—of course with all sorts of exaggerations.

The first thing which strikes a stranger in talking to them is the frequent use of the words *tse* and *se*, both signifying 'very good,' and occurring in nearly every phrase. They are also used as affirmatives, 'yes,' 'it is so.' In receiving an order or listening to an anecdote from an official, the Mongol utters his invariable *tse* or *se*. If he wish to express a good or bad quality in anything, approval or censure, besides repeating these two syllables, and sometimes without, he holds up the thumb or forefinger of the right hand, as the case may be, the

MONGOL GIRL.

Madame de Bourboulon, who accompanied her husband across Northern Mongolia on their way from Shanghai to Moscow in 1862, describes the occupants of a Yurta as follows:

'They wore vests of green and red velvet, and over these a long robe of violet silk falling to the feet, which were shod with boots of purple leather decorated with glass beads. Their costume was in other respects the same as their father's, with the exception of their long and fine black hair divided into numberless small tresses, intermixed with ribbons and coral beads.'—*Le Tour du Monde*, xi. p. 248.

former for praise, the latter for blame. He addresses his equal as *nohor*, i.e. 'comrade,' as we should say 'sir.'

Their songs are always plaintive, and relate to their past life and exploits.[1] They usually sing on a caravan journey, and occasionally in the yurta, but the women's voices are not heard so often as the men's. Troubadours or wandering minstrels always secure an appreciative audience. Their musical instruments are the flute and guitar; we never saw them dance, and they are probably unskilled in the art.

The lot of the woman is most unenviable. The narrow sphere of nomad life is even more restricted for her. Entirely dependent on her husband, she passes her time in the yurta nursing the children and attending to domestic duties. In her spare time she works with the needle, stitching clothes or some piece of finery made of Chinese silk. Some of the handiwork is in good taste and beautifully finished.

A Mongol can only have one lawful wife, but he may keep concubines, who live with the real wife, the latter taking precedence in rank and ruling the household; her children enjoy all the rights of the father, while those of the concubines are illegitimate, and have no share in the inheritance. An illegitimate child can be legitimised by the sanction of government.

At the marriage festivals the relatives of the

[1] The most common song in Mongolia is 'Dagn-khara,' i.e. 'The Song of the Black Colt.'

husband are treated with respect; those of the wife are of no account. To ensure the happiness of the young couple an auspicious reading of the stars[1] under which they were born is indispensable. If the omens are unpropitious, the marriage does not take place.

The bridegroom pays the parents of the bride, according to agreement, sometimes a good sum as purchase-money, either in cattle, clothes, or, more rarely, in coin; the wife provides the yurta, with all its fittings, as her portion.[2] If the marriage turn out unhappily, or even to gratify some whim or caprice, the husband may put his wife away, but the latter may also desert a husband who is not affectionate. In the first case the purchase-money is not usually returned, and the man may only retain part of the dower; but if the wife desert her husband she must repay part of the ante-nuptial settlement. This custom often gives rise to little romantic episodes, enacted in the heart of the steppe, which never find their way into a novel.

The women are good mothers and housewives, but unfaithful wives. Immorality is most common, not only among the married women, but also among the girls. Adultery is not even concealed, and is not regarded as a vice. In the household the rights

[1] They reckon their period of twelve years by the signs of the Zodiac. [Surely the Author here means to refer to the *Cycle* signs (*supra*, p. 64), not the *Zodiac*.—Y.]

[2] A full description of a Mongol wedding will be found in 'Timkowsky's Travels,' vol. ii. pp. 303–311, and in Huc's 'Souvenirs d'un Voyage dans la Tartarie et le Thibet,' vol. i. pp. 297–391.

of the wife are nearly equal to those of the husband, but in all out-door arrangements, as in moving camp, paying debts, buying and selling, the authority of the men is supreme, and no reference even is made to the women; but, as there is no rule without an exception, so we have seen Mongol ladies who not only managed their household, but interfered in other affairs as well—in fact, completely henpecked their husbands.

The appearance of the women is not attractive. The typical features of their race, the flat face and high cheekbones, spoil their looks; and the rough life in the yurta, exposure to the weather and dirt, deprive them of any feminine grace and delicacy, and all attractiveness to European eyes. As a rare exception, but only in some princely families, a beautiful face may now and then be seen, its fortunate possessor being surrounded by a crowd of adorers, for the Mongols are very susceptible to the charms of the fair sex. The women are far less numerous than the men, a fact which is accounted for by the celibacy of the lamas. The Mongol is an excellent father, and passionately fond of his children. Whenever we gave them anything they always divided it equally among all the members of their family, were it a lump of sugar, and the portion of each individual only a crumb. The elders are always held in great respect, especially old men, whose opinions and commands are implicitly followed. They are very hospitable. Any one who enters the yurta is regaled with tea and milk, and, for old acquaintance sake, a

Mongol will open a bottle of brandy or kumiss, and will even slaughter a sheep.

On meeting an acquaintance, or even a stranger, the Mongol salutes him with a '*mendù*' '*mendu-seh-beina.*' A pinch of snuff is interchanged, and the greeting is renewed '*mal-seh-beina,*' '*ta seh-beina,*' i.e. 'How are your cattle?' This is always one of the first questions, and they make no enquiry after your health until they have learned that your sheep, camels, and horses are fat and well to do. In Ordos and Ala-shan the usual greeting is '*Amur se,*' 'Are you well?' but in Koko-nor it is substituted by the Tangutan '*Tehmu,*' 'How do you do?' The friendly pinch of snuff is unusual in Southern Mongolia, and unknown in Koko-nor. Some amusing anecdotes are related, illustrating the custom of enquiring after cattle in the case of young travellers, journeying for the first time from Kiakhta to Peking. A young officer, bearing despatches for Peking, and happening to change horses at one of the Mongol stations, he was soon surrounded by natives, who began their respectful enquiries as to the health of his sheep, &c. Learning from the interpreter the meaning of their questions, he emphatically shook his head and denied possessing any; but they could not believe that a personage of his exalted rank could exist without sheep, cows, horses, or camels. We often had the most detailed questions asked us, such as: 'In whose care had we left our cattle before our departure on so long a journey?' 'What was the weight of the *kurdiuk* (fat tail) on each of our sheep?' 'Did we

enjoy the luxury of eating this delicacy at home?' How many good amblers did we possess, and how many fat camels?' In Southern Mongolia, as a mutual token of good-fellowship, *hadaki* (silk scarves) are interchanged by the host and his guest; these scarves are bought of the Chinese, the quality varying with the rank of the recipient.[1]

When these salutations are over, tea is offered, and, as a special mark of civility, lighted pipes are handed round. The visitor never wishes his host good-bye on taking his departure, but gets up and walks straight out of the yurta. The host always escorts his guest to his horse, which is tethered a few paces from the tent,—a sign of respect invariably shown to lamas of importance and government officials.

Although servility and despotism are so strongly developed among them that the will of the superior generally replaces every law, a strange anomaly is observable in the freedom of intercourse between rulers and the ruled. At the sight of an official the Mongol bends the knee and does reverence, but after this obsequious token of submission he takes his seat beside him, chats and smokes with him. Accustomed from childhood to perfect liberty, he cannot endure restraint for any length of time, but soon gives free rein to his habits. This freedom of manners and equality may surprise the inexperienced

[1] Among the Khalkas the scarves serve as currency, but are rarely used for presents. [The polite interchange of the scarf (*K'hata* of the Tibetans) is noted again in one of the later chapters on Tangut.—Y.]

traveller, but, if he look more deeply into it, he will find it is nothing but the wild unbridled nature of the nomad, requiring liberty for his childish habits, and perfectly indifferent to the awful despotism of social life. The very official, who to-day sits beside his inferior and smokes a pipe with him on terms of good-fellowship, may to-morrow punish his companion, confiscate his sheep, or practise any injustice he likes with impunity.

Bribery and corruption are as prevalent here as in China; a bribe will work miracles, and nothing can be done without it. The worst crime may go unpunished if the perpetrator gives a good purse to the proper authorities; on the other hand, a good act has no merit without a certain offering, and this system pervades the whole administration, from the lowest to the highest.

Turning to their religion, we see how deeply Lamaism has struck root in their midst, more so perhaps than in any other Buddhist country.[1] Holding contemplation to be the ideal of all perfection, it exactly suits their indolent character, and has laid the foundation of that terrible asceticism which induces them to sever themselves from all desire for progress, and to seek, in obscure and abstract ideas of the Divinity and life beyond the tomb, the sum and end of man's earthly existence.[2]

[1] It is not known exactly when Buddhism was introduced into Mongolia; a few traces of Shamanism, one of the oldest religions of Asia, are still left in the country.

[2] We have nothing to do with the philosophy of Buddhism in this work; this subject has been treated in the Russian language by Professor Vassilieff, entitled 'Buddhism.'

Their religious service is performed in Tibetan,[1] which is also the language of their sacred books. The most famous is the *Ganjur*, comprising 108 vols., including, besides religion, such subjects as history, mathematics, astronomy, &c. Service in the temples is performed three times a day: at morning, midday, and in the evening. The call to prayers is by blowing trumpets made of large sea-shells; when the congregation are assembled, the lamas, seated on the floor or on benches, chant passages from the sacred books. From time to time this monotonous chanting is interrupted by exclamations from the presiding lama, repeated after him by the others, and at certain intervals cymbals or brass plates are clashed, which add to the general noise. The service continues for some hours; when the Ḳutukhtu is present in person, the ceremonial observed is of course more imposing. He always occupies a throne, robed in vestments, with his face towards the idols, while the attendant lamas swing censers in front of him and read the prayers.

The frequently repeated prayer, constantly on their lips, is '*Om mani padmi hom.*'[2] We tried in vain to discover its meaning. The lamas assured

[1] Which the lamas themselves do not always understand. The Tibetan letters are arranged in horizontal lines, not like the Chinese and Mongolian, which are in vertical columns.

[2] Klaproth's explanation of this prayer, which, he says, is composed of four Hindu words, meaning 'Oh! precious lotus,' is unsatisfactory. See Timkowski's 'Travels,' English edition, London, 1827, vol. ii. p. 349, note.

Mr. Wilson found these words beautifully inscribed on stones in some parts of the Himalayas, even high up the mountains. In refer-

us that it contained the whole mysticism of their religion, and was inscribed not only on the temples, but on other buildings. Besides the usual temples[1] in those localities far removed from them, *duguni*, i.e. oratories, are arranged in the huts. Lastly, on the passes and high mountains large heaps of stones, called *obo*, are piled up in honour of the guardian spirits. These 'obo' are held in superstitious reverence, and a Mongol never passes one without adding a stone, rag, or tuft of camels' hair, as an offering. In summer religious services are held at them, and the people meet here on holidays.

The Dalai Lama of Tibet, residing at Lhassa, is the head of the whole Buddhist hierarchy, and sovereign of Tibet, acknowledging fealty, however, to China; but this submission is merely nominal, and is only outwardly shown by gifts sent three times a year to the Emperor.[2]

Equal to the Dalai Lama in sanctity, but not in political importance, is another Tibetan saint, *Pan-tsin-Erdeni*;[3] the third and last personage in Buddhism is the *Kutukhtu* of Urga. Next in rank come the remaining Kutukhtus or Gigens, who live at the different temples dispersed throughout Mongolia or

ence to their meaning, he quotes Koeppen's remarks in the 'Lamaische Hierarchie und Kirche,' p. 59, which are most striking. See 'The Abode of Snow,' by Andrew Wilson. Blackwood, London, 1875. pp. 329–332.—M. (See Supplementary Note.)

[1] Called in Mongolia *sumo*, less frequently *kit* or *datsan*.

[2] The Chinese Government maintains a division of troops and an envoy plenipotentiary at Lhassa [which seems somewhat inconsistent with merely 'nominal' subjection.—Y.]

[3] See p. 11, supra.—Y.

in Peking; there are upwards of a hundred of them[1] in Mongolia. They are all terrestrial saints, of highly-developed holiness, who never die, but pass from one body to another. A newly-born gigen is discovered by the lamas of the temple to which his predecessor belonged, and is confirmed in office by the Dalai Lama. It devolves upon the latter dignitary to appoint a successor to himself, but the Chinese Government secretly exercises great influence in the election, which usually falls on some poor unknown family. The personal insignificance of the Dalai Lama, in the absence of family ties in the country, is the best guarantee the Chinese can have of the submission of Tibet, or, at all events, of their own security from an unruly neighbour. They have indeed good cause to be watchful, for if a talented, energetic person were to appear on the throne of the Dalai Lama, he might with one word, like the voice of a god, cause a rising of the nomads from the Himalayas to Siberia. Deeply imbued with religious fanaticism and the bitterest hatred for their oppressors, the wild hordes would invade China and cause it great injury.

The influence of the gigens is unlimited; a prayer offered up to one of them, the touch of his garments, his benediction, are regarded in the light of the greatest blessings humanity can enjoy; but they are not to be had gratis. Every believer must bring his offering, which, in some cases, is very large. The

[1] 103 in all. Hyacinthe's 'Statistical Description of the Chinese Empire,' part ii. p. 60.

temples of Mongolia, especially the larger and more famous, attract wealthy pilgrims from far distances.

These pilgrimages, however, are, if we may so call them, private enterprises. Lhassa is the sacred city; hither large caravans of worshippers annually come, and, regardless of the difficulties of the long journey, esteem it a special mark of Divine favour to be allowed to fulfil their religious obligations. The Dungan insurrection put a stop to them for eleven years, but, as soon as the Chinese forces occupied Eastern Kan-su, they were renewed. Women sometimes take part in them, but, let it be said to their credit, are not such hypocrites as the men. This may be from the fact that all domestic work is done by them, and they have less time to spare for religion. The inhabitants of the border-land are also far less devout than those in the heart of the country.

The clergy, or so-called lamas,[1] are very numerous, and comprise a third, if not more, of the male population, who are thereby relieved from the payment of all taxes.[2] It is not difficult to become a lama. Parents must voluntarily dedicate their son to this profession while he is an infant, shave his head, and dress him in a red or yellow robe. This is an external mark of the future vocation of the

[1] Properly speaking, the word 'lama' is only applied by Mongols to their superior clergy; an ordinary member of that profession is called *Huvarak*. But the former name is much more generally used than the latter.

[2] Lamas holding important posts at the temples are entirely freed from imposts; those non-officiating are paid for by their families.

child, who is afterwards given over to the temple, where he is taught his letters and the Buddhist mysteries by the elder lamas.[1] In some of the most important of these establishments, for instance at Urga or Kumbum,[2] special schools are built for the purpose, and divided into faculties. On completing his studies, the lama is attached to some temple, or practises as a physician.

Promotion to the highest ranks is effected by an examination in the Buddhist books. The ranks of the clergy are as follow: *Kamba*, *Hehlung*, *Hehtsul*, and *Bandi*—each having a distinctive dress[3] and station during prayer-time, and separate rules for the regulation of their lives. The highest grade is the Kambu or Kianbu, ordained directly by the Kutukhtu, with the right of conferring ordination on the lower ranks. The Kutukhtus are also obliged to pass through the different degrees, but they reach them sooner than ordinary mortals.

The lamas discharge certain duties in the temple according to their rank. The *Tsiabartsi* is the sacristan; the *Piarba*, housekeeper; *Kesgui*, ecclesiastical superintendent; *Umzat*, precentor; *Duntsi*, treasurer; *Sordji*, superior or abbot.

Besides these, several hundred (sometimes a thousand or more) lamas are attached to every

[1] Lamas unattached to a temple, but who live in yurtas, also take pupils.

[2] The temple of Kumbum is in the province of Kan-su, near Si-ning.

[3] The dress of the lamas is invariably yellow, with a red belt or band over the left shoulder. At prayer-time, special yellow mantles and tall caps are worn, differing in appearance according to their rank.

temple, who do nothing but pray, subsisting on the alms of the faithful. Some have never been sent to school by their parents, and are, therefore, illiterate, but they wear the same red robes as the others, and bear the title of their office, which is considered honourable.

All lamas must be celibates, an abnormal state, which gives rise to every kind of immorality.

Women above a certain age may enter this profession, for which they are regularly ordained. Their heads are shaved, they are compelled to swear the observance of a strict life, and have the privilege of wearing yellow, like the lamas. They are often met with among aged widows, and are called *shabgantsa.*

Lamaism is the most frightful curse of the country, because it attracts the best part of the male population, preys like a parasite on the remainder, and, by its unbounded influence, deprives the people of the power of rising from the depths of ignorance into which they are plunged.

But although this religion has taken so strong a hold on them, superstitions are equally prevalent. Evil spirits and witchcraft beset the Mongol's path. Every unfavourable phenomenon of nature is ascribed to the wicked spirit; every sickness is caused by him. Their everyday lives are full of superstitious observances. Thus, they will not give or sell milk in cloudy weather or after sunset, lest their cattle should die; it is considered unlucky to sit in the entrance of the yurta, or to eat seated on the heels,

some accident will surely happen afterwards; a journey must never be discussed beforehand, bad weather or a hail-storm will be certain to follow; the names of father or mother must not be mentioned; nothing should be sold or given away for three days after the recovery of one of the cattle, and so on.

'But all these customs are a mere fraction of their superstitions. Soothsaying and sorcery are strangely developed among them, and are exercised not only by the shamans and lamas, but also by ordinary mortals, women excepted. The soothsayers carry rosaries or strings of Chinese copper money, and make use of sundry exorcisms. If a beast be lost, a pipe or tinder-box mislaid, recourse is always had to the prophet to learn where to look for the missing property; when a journey is about to be undertaken the auguries must be consulted; if a drought occur, the whole tribe must apply to a shaman, and large sums are paid to induce him to make the heavens send down to earth the life-giving moisture; if attacked by a sudden illness, the Mongol calls in a lama to drive away the devils which have entered his body. Time after time the impositions practised by sorcerers and magicians are exposed, yet the Mongol never loses his childish reliance on them. One fortunate result is sufficient to wipe out the recollection of all previous failures, and the reputation of the prophet stands as high as ever. Some are so artful that they discover beforehand all that is necessary to know for the successful practice of their profession, and after deceiving others so often they

at length themselves believe in their own supernatural powers.

The Mongols expose the bodies of their dead to be devoured by birds and beasts of prey, their lamas deciding in which direction the head should lie. Princes, gigens, and lamas of importance are interred or burnt after death. Masses are said for the departed for forty days on payment of a sum of money. The poor who cannot afford to pay are deprived of this honour, but the rich distribute cattle among the different temples where masses are said for their deceased relatives for the space of two or three years.

A Mongol, who might claim, apart from inevitable defects in intelligence and morality, to be called a good and religious man, will show himself to be a true barbarian in giving vent to his passions. It is only necessary to see the savage way in which they behave to the Dungans. The very man who would scruple to kill a lamb, because he considered it wrong, will cut off the head of his prisoner with the utmost *sangfroid.* Neither sex nor age is respected; the captives are slaughtered indiscriminately. The Dungans certainly retaliate in like manner; but I only mention this to prove how powerless is religion alone, without other civilising influences, to soften and transform the barbarous instincts of a nation. Buddhism inculcates principles of lofty morality, but it has not taught the Mongol to look upon every man as his brother and respect even an enemy.

Again, the custom of exposing the dead to be devoured by wild animals, a sight which may be seen by any traveller near Urga, where hundreds of corpses are annually devoured by dogs and crows, revolting to the rudest nature, but not so to the Mongol, who coolly drags his nearest and dearest relatives to this spot, and sees the dogs tear his father, mother, or brother to pieces as unconcernedly as though he were a senseless creature.

Let this be a lesson to Christian missionaries in these countries, not to teach the mere outward observance of religion, but to accompany their doctrines with refining influences of civilisation and the culture of a superior race. First wean the Mongol from his dirt; convince him that idleness and sloth are vices and not among life's pleasures; impress upon him that God requires of every man good works, and not merely a certain number of set prayers; and then, if you will, explain to him the forms of the Christian religion. The new doctrines must not only open his mind to a new spiritual and moral life, but must effect a radical change in his domestic and social state. Then only will Christianity bear fruit and throw out new shoots sowing good seed among the rude untutored inhabitants of Mongolia.[1]

[1] [Col. Prejevalski's opinion seems to be that when the tree produces its fruits, then, and not till then, is the time to plant it.—*N.*] Geographically Mongolia of to-day comprises the extent of country from the upper waters of the Irtish on the west to Manchuria on the east, and from Siberia on the north to the Great Wall and the Mahomedan countries lying near the Thian Shan on the south.

At the end of the seventeenth century the Chinese, after subduing almost the whole of this country, allowed its separate organisation to remain unchanged; only introducing a more efficient system of administration; and while maintaining the independence of its princes in local affairs, they placed them under the strict supervision of the Government of Peking. All the business connected with Mongolia is transacted by the Foreign Office (*Li-fan-yuen*), matters of high importance being referred to the Emperor. It is governed on the basis of a military colony; its chief divisions or principalities are called *aimaks*,[1] each comprising one or more *koshungs*, i.e. banners which are subdivided into regiments, squadrons, and tens. The aimaks and koshungs are governed by hereditary princes, who acknowledge

Its southern boundary, however, is south of the Great Wall, in the basin of lake Koko-nor, where the frontier takes a deep bend to the south.

[1] Northern Mongolia, i.e. the Khalka country, is composed of 4 aimaks and 86 koshungs; Inner and Eastern Mongolia, with Ordos, of 25 aimaks, divided into 51 koshungs; the country of the Chakhars into 8 banners; Ala-shan forms 1 aimak, with 3 koshungs; Koko-nor and Tsaidam, 5 aimaks, and 29 koshungs. Western Mongolia, so-called Dzungaria, comprises 4 aimaks, and 32 koshungs; but as the numbers of its Mongol inhabitants were small in comparison with the Chinese immigrants before the insurrection, it was divided into seven military circuits. The aimak of Uriankhai includes 17 koshungs. Full details on the administrative divisions of Mongolia may be found in Hyacinthe's 'Statistical Description of the Chinese Empire,' part ii. p. 88–112; and in 'Timkowsky's Travels' (English translation, edited by Klaproth, London, 1827, vol. ii. p. 223–292). From these two sources I have derived my information on the territorial divisions and government of Mongolia. [*Aimak* is properly a division of persons, not of territory, though it may have acquired a localised sense. Originally all the organisation of Mongol authority had reference to *persons*, who might be on the Volga one year, on the Amur another.—Y.]

GROUP OF KALKHAS MONGOLS.

the Emperor of China as their lord paramount, and may not enter into any relations with foreign powers without reference to Peking. The *tosalakchi*, whose office is also hereditary, rank next; each banner has one, two, or four of these officials; the prince, who is military chief of the banner, has two lieutenants (*meiren zanghin*); every regiment has its colonel (*chialan zanghin*), and captains of squadrons (*somun zanghin*).[1] The whole military force of the aimak is under a *tsiang-tsiun* (general), chosen from among the Mongol princes.

The princes of the koshungs or banners assemble once a year for the gathering[2] (*chulkan*), presided over by one of their number who must have been confirmed in his authority by the Emperor. These assemblies, at which local questions are decided, are under the control of the governors of the nearest provinces of China.[3]

Some parts of the country bordering with China Proper are modelled entirely after the Chinese system; such as the district of Cheng-ta-fu beyond the Great Wall, north of Peking, the aimak of Chakhar, north-west of Kalgan, and the district of Kukuhoto (Kwei-hwa-cheng), still further to the west, near the northern bend of the Yellow River. Western

[1] Every squadron has two officers, six under-officers, and 150 rank and file.

[2] Assemblies are also summoned on extraordinary occasions.

[3] The governor of Kuku-hoto has the charge of Ordos, Western Tumit, and the nearest aimaks of Mongolia; Koko-nor and Tsaidam are placed under the governor of Si-ning (in Kan-su); the two westernmost aimaks of Khalkas are governed by the tsiang-tsiun of Uliassutai, and so on.

Mongolia (*Dzungaria*) until the recent insurrection was divided into seven military circuits[1] under a different form of government.

The princely caste has six grades ranking in the following order: *Khan*, *Tsin-wang*, *Tsiun-wang*, *Behleh*, *Behzeh*, and *Kung*. Besides these are the nobles owning land (*Tsasak-tai-tsi*),[2] the greater number tracing their descent from Chinghiz-Khan. The title descends to the eldest son by lawful marriage if he has attained the age of nineteen, Imperial permission having been first obtained. If there be no legitimate sons, the title may be transmitted to one of the natural children or to the nearest male relative, but not without the consent of the Emperor; the other children rank as nobles (*tai-tsi*) divided into four classes. In this way the princes never increase in number (there are 200 altogether), but the nobility are constantly becoming more numerous.

The princes, as we have said, enjoy no political rights, and are under the absolute authority of the Peking Government, which watches their actions with jealousy. Their salaries[3] are received direct from the Emperor, who promotes them at will from one class to another. Princesses of the Imperial family[4] are sometimes given in marriage to Mongol

[1] Two of these (Urumchi and Barkul) were included in the province of Kan-su.

[2] The name 'Tsasak' is given to every proprietary chief in Mongolia.

[3] The salaries of the princes alone amount to 120,000 lans of silver and 3,500 pieces of silk annually.

[4] These princesses also receive fixed salaries from the Emperor, and are only allowed to come to Peking once in ten years.

princes, in order to strengthen by family ties the power of China over their nomadic subjects. Every prince must appear at court once every three or four years to pay his respects to his sovereign; on these occasions they bring gifts, mostly camels or horses, receiving in return silver, silk, costly dresses, caps adorned with peacocks' feathers, &c., always of far greater value than those brought. Indeed Mongolia costs China a round sum every year;[1] on the other hand, the Middle Kingdom is secured from any possible invasion by the ruthless nomads.

The exact population of Mongolia is unknown. Père Hyacinthe estimates it at three millions, Timkowski at two; in any case the number is insignificant in proportion to the extent of country. This could hardly be otherwise if we consider the conditions of nomad life, and how barren the Mongolian deserts for the most part are. The increase of population is also very slow, owing to the celibacy of the lamas, and the diseases which at times cause great ravages.

The Mongols are divided into four classes:

[1] A prince of the 1st rank receives 2,000 lans of silver and 25 pieces of silk.

A prince of the 2nd rank receives 1,200 lans of silver and 15 pieces of silk.

A prince of the 3rd rank receives 800 lans of silver and 13 pieces of silk.

A prince of the 4th rank receives 500 lans of silver and 10 pieces of silk.

A prince of the 5th rank receives 300 lans of silver and 9 pieces of silk.

A prince of the 6th rank receives 200 lans of silver and 7 pieces of silk.

Tsasak tai-tsi (nobles), receive 100 lans of silver and 4 pieces of silk.

princes, nobles (*tai-tsi*), clergy, and common people. The first three enjoy all civil rights; the last are semi-independent military settlers, who are not liable to a land tax or to military service. Their laws are embodied in a separate code published by the Chinese Government, to which the princes must conform in their administration; proceedings of minor importance are, however, decided according to traditional usage. The punishments are fines and banishment, and for crimes and robberies with violence, in some instances, death. Corporal punishment is inflicted on the common people as well as on nobles and officials judicially degraded. Bribery, corruption, and every kind of abuse in the administration and judicial proceedings are most prevalent.

The people only pay a cattle tax to their princes; but on extraordinary occasions, such as when the latter travel to Peking or to the assembly, on the marriage of their children, or on removal of camp, special collections are levied. The Mongols pay no tax whatever to China, and are only liable to military service, from which, however, the clergy are exempt. The army is exclusively cavalry; one hundred and fifty families form a squadron; six squadrons a regiment, the regiments of one koshung a banner. The people defray the cost of military equipments, but government provides arms. If the whole nation were called out for military duty, Mongolia ought to supply 284,000 men,[1] but less than

[1] Men are liable to military duty from the age of eighteen to sixty; one man in three of a family is relieved from service. The arms are

one-tenth of that number would be available. The tsiang-tsiuns (generals) of the aimaks (districts) ought to inspect the forces and examine their arms, but it is usual for every koshung to avoid this by bribery. The indolent Mongol will rather pay his money than turn out for military-service. The Chinese Government is in one sense content with this, because it proves that the ancient martial spirit of the nomads is year by year becoming extinct.

exceedingly bad, consisting of spears, swords, bows, and matchlock guns.

CHAPTER III.

THE SOUTH-EASTERN BORDER OF THE MONGOLIAN PLATEAU.

Peking—First Impressions—The Streets and Walls—European Establishments—Preparations for the Journey—Fire-arms and Outfit—Insufficiency of Funds and its Consequence—Financial Arrangements—Chinese Currency—Inconveniences of the Copper Currency—Passport—Departure from Peking—Preliminary Tour to the North—Ku-pe-kau Gate in Wall—Migration of Wild-fowl—Road to Dolon-nor—Wood on the Way—Jehol—Fauna of the Route—Goître—Khingan Range—Dolon-nor—Idol Foundry—Shandu River—Tsagan Balgas—Sandhills called *Guchin-gurbu* or 'the 33'—A Steppe-fire on the Dalai-nor—The Lake Dalai—Birds on the Lake—Mocking-bird—Surveying Difficulties—Mode of Surveying—Suspicions of the Natives—The Route plotted daily—Road back to Kalgan—Steppe Horses—Imperial Pasture Lands—Climate of South-Eastern Mongolia—The two-humped Camel—Its habits, uses, &c.—Arrival at Kalgan.

PEKING, or, as the Chinese call it, *Peh-king*,[1] was the starting point of our expedition. Here we met with the most cordial hospitality from our countrymen, the members of the diplomatic and clerical missions, and here we abode nearly two months making preparations for the journey. My acquaintance with the city is very superficial. Its great extent and outlandish appearance to European eyes, the strange manners of the Chinese, and, lastly, ignorance of the language, prevented me from acquainting myself in detail with all its marvels. I may candidly

[1] *Peh-king*, i.e. 'northern capital.'

confess, however, that the impression it left on my mind was far from agreeable; indeed, a new comer could hardly be pleased with a city in which cess-pools and crowds of naked beggars [1] are the adjuncts of even the best streets. If we add to this the insolent effrontery of the Chinese themselves and the nickname of *Kwei-tsz*, i.e. 'foreign devils,' with other opprobrious epithets, which they bestowed upon us, it may readily be imagined that Peking is not the pleasantest place in the world for a stroll. To complete the picture, collectors of manure are continually moving about plying their trade with baskets on their arms; the smells are beyond description, and the water used for laying the dust is taken from the sewers.

The principal streets are wide and straight, bordered with rows of shops decorated in every conceivable style, and with mud walls which conceal from view the dwellings of the inhabitants. The town is lighted with paper lanterns stuck on wooden tripods several hundred yards apart, in which are usually placed lighted tallow candles. There is no particular need, however, of nocturnal illumination, because the Chinese generally conclude their out-door business by sunset, so that with the approach of twilight hardly anyone is to be seen abroad even in the most populous quarters of the town.

Peking is divided into two parts, an inner town (Nei-cheng) in which the palace of the Emperor

[1] The beggars in Peking are said to number 40,000; they have a king or chief of their own, who exacts a certain tribute from all the shops in the town.

stands, and an outer (Wai-cheng), much smaller than the first,[1] each being surrounded by a battlemented mud wall (on which towers rise at intervals), that of the inner about fourteen miles in circumference,[2] 33 ft. in height and 60 ft. thick, with nine gates, which are closed at sunset and opened at sunrise; that of the outer only ten miles round with seven gates.

The five foreign embassies [3] are all together in the southern quarter of the inner town near the gate of Tsian-men. Our missionary establishment stands in the north-eastern angle of the so-called northern suburb (Peh-kwan [4]); this town also contains four Catholic churches,[5] several Protestant institutions, and a custom-house. These complete the list of European buildings in Peking, no foreign merchants, Russians included, having the right by treaty of trading here.

The task of preparing for our journey was not an easy one. We had no one to consult, for none of the Europeans resident at that time at Peking

[1] The terms 'inner' and 'outer' are incorrect inasmuch as both lie close together, but one does not include the other. The palace is situated in the Imperial town (Hwang-cheng), which occupies the centre of the inner. A detailed description of the capital of the Celestial Empire has been translated from the Chinese by Père Hyacinthe.

[2] The whole of Peking, exclusive of its suburbs, is about 20 miles (58 li) in circumference. The number of its population is uncertain, but cannot be very large, because there are so many ruins and empty spaces in the town.

[3] English, Russian, French, German, American.

[4] The southern suburb, in which the diplomatic mission-buildings are situated, is called '*Yuen-kwan*.'

[5] *Peh-tang*, *Nan-tang*, *Si-tang*, and *Dum-tang*. [*Tung*-tang? i.e. North, South, West, and East.—Y.]

had travelled beyond the Great Wall in a westerly direction. Our object was to strike the northern bend of the Yellow River, visit the country of Ordos and Lake Koko-nor, and, in fact, explore regions almost entirely unknown to Europeans. We had, therefore, to be guided by our instincts in equipping ourselves with everything needful, and in deciding upon the best means of travelling.

Our winter journey from Kiakhta to Peking, followed by a prolonged residence in the latter city, convinced me that the only chance of success in travelling through the secluded dominions of China lay in entire independence of the inhabitants, who viewed with hostility every attempt of Europeans to penetrate into the more remote regions of their country. We tried in vain to find a Chinese or a Mongol who would accompany us on our proposed wanderings. The offer of liberal payment, the promise of a large reward if the journey were successful, and other tempting baits of this kind, failed to overcome their distrust and cowardice; some at first agreed to our proposals, but afterwards broke their word. Seeing how impossible it was to depend on such auxiliaries for a distant expedition like ours, we determined on buying camels and managing them ourselves, with the assistance of two Cossacks who were to accompany us.

Having procured seven pack-camels and two riding-horses, we proceeded to arrange the baggage and take necessary supplies for a twelvemonth, as this time we did not expect to reach Koko-nor, but

intended devoting a year to the exploration of the middle course of the Yellow River, and then returning to Peking. When everything was ready, our *impedimenta* consisted chiefly of guns and ammunition for the chase, both very ponderous but indispensable: first, as a means of collecting specimens of birds and animals; secondly, because we should have to depend on them for supplying us with food in the districts which had been entirely depopulated by the Dungans, as well as in those parts of China where the inhabitants might refuse to sell us provisions in the hopes of starving us out; lastly, our guns would protect us against robbers, by whom, at all events during the first year, we were unmolested, a circumstance which may be attributed to our being well-armed, and proving the force of the old maxim, '*Si vis pacem para bellum.*'

The rest of our baggage comprised the apparatus for preparing specimens and drying plants; such as blotting-paper, pressing-boards, tow for stuffing, plaster-of-Paris, alum, &c., &c. All this was packed into four large boxes which galled the backs of our camels, but, at the same time, were indispensable to contain the collections. Lastly, I purchased a quantity of small articles for the sum of about 40*l.* to assist me in my assumed character of merchant. This merchandise, however, proved to be a useless incumbrance; the time lost in trafficking interfered with our scientific pursuits, and did not serve to conceal the real object of our journey. The provisions for our immediate wants were a case of

French brandy, 36 lbs. of sugar, and two sacks of rice; we hoped to obtain as much meat as we required with our guns.

This meagre supply for our personal consumption was occasioned by the slenderness of our finances. The first year of our travels we received from the War Department, the Geographical Society, and the Botanical Gardens of St. Petersburg the aggregate sum of 350*l.*, including my salary; in the second and third the amount was increased to 500*l.*; my travelling companion, M. Pyltseff, received the first year 40*l.* and the two following 80*l.* I state the case plainly as to our monetary resources simply because the want of means was the greatest possible hindrance to us. In proof of this, I may remark that as each Cossack was entitled to 28*l.* a year salary, which I paid regularly in silver, I could not afford more than two men. My companion and I were, therefore, obliged to load the camels ourselves, to pasture them, to collect argols for fuel, &c., in fact, do all the drudgery; whereas, under other circumstances, the time thus spent might have been devoted to scientific observations. Again, I could not afford a good interpreter of the Mongol language, thoroughly conversant with his duties, who would have been of the greatest service on several occasions. My Cossack-dragoman was by turns labourer, herdsman, cook, constantly employed in one or other of these capacities, and only able now and then to spare a short time for his legitimate business. Lastly, our poverty was the cause of our actually suffer-

ing from hunger more than once, when no game was obtainable and we could not pay the extortionate price demanded for a sheep. On returning to Peking after the first year, I could not help smiling on hearing a member of one of the foreign embassies enquire how we managed to carry about with us so large a quantity of silver, gold not being current in Mongolia. What would this gentleman have thought of us if he had known that on starting from Peking we only took 65*l.* in cash?

To add still more to our embarrassment, the moneys assigned for our use were not even paid in full, but were remitted to Peking in half-yearly instalments by the War Department, and a year in advance by the Geographical Society and Botanical Gardens. The obliging assistance of General Vlangali rescued us from the critical position in which we should otherwise have found ourselves, and I received out of the Mission fund a loan of the annual amount payable to me, and, on starting for the second time, even more.

Silver rubles are exchanged at Peking at the rate of two for one liang (taël) of Chinese silver (5*s.* 6*d.*). I should also mention that, with the exception of the small cash, made of copper alloyed with zinc, there is no coinage in China. Silver is always paid and received by weight, and according to assay. The unit is the *liang*[1] (taël or ounce), its tenth part is a *kiang* (also pronounced tsiang);

[1] Twelve liangs average about a pound in weight. [Col. Prejevalski generally writes *lan.*]

the tenth of a kiang is a *feng*; 16 liangs make a *king* (or *hing*). The weight of the ounce varies according to the three different scales used, viz. government, market, and hand-balance. The purest silver is cast in wedge-shaped ingots, each weighing about 50 ounces and bearing the government mark, or the stamp of the private firm which has cast them. There is less alloy in this than in any other. In paying small sums you cut off bits from the ingot as you require them, weighing them in a hand-balance; for larger dealings a pair of scales and two bowls are used. In these transactions the experienced Chinaman invariably gets the better of you, by inclining the balance one way or the other, according as he has to pay or receive; he will also cheat you, in the quality, particularly when in small lumps, which are apt to contain a good deal of bad metal.

I should also mention that petty transactions are ordinarily settled with cash,[1] which are so heavy that a ruble's worth (about *2s. 8d.*) weighs on an average 8 lbs. Of course you cannot take enough coins with you,[2] and are, therefore, obliged to exchange your silver as you find it necessary; your difficulties are further increased by the different rates of exchange in almost every town and in many of the villages in China. In some places, 30 cash count as a hundred, in others 50, 78, 80, 92, 98 are worth no more: an absurdity which could only be

[1] To facilitate calculations 500 cash are strung on a cord by means of a square hole in each.

[2] 15*l.* worth of copper cash weigh 6½ cwts., or about three camel-loads, whilst the cost of each camel is nearly 35*l.*!

met with in this country. But these local exchanges do not exclude the general rate which equalises the values of the coin. The latter is known to the Mongols under the name of '*manchan*,' the former as '*dzelen*.' Before buying anything you must always ask whether the price is according to the general or local rate; otherwise, you may find yourself out in your calculations. If, in addition to all this, it be considered that weights and measures differ all over the Empire, you may form an idea of the fraud and dishonesty to which the traveller is exposed even in the most trifling purchases. In order to avoid disputes in weighing silver, and also for the sake of economy, I bought the medium or market scales; but they seldom answered our purpose. We lost heavily by exchanging silver into copper, as we were often unable to ascertain the local rate, which varies every ten miles or so.[1] Indeed, from first to last we paid a large premium to the roguery and rascality of the natives, and were imposed upon in the most scandalous way.

Through the courteous intervention of our Ambassador we received a passport from the Chinese Government, permitting us to travel in South-eastern Mongolia and Kan-su; and having completed our preparations, we started from Peking on March 9th,

[1] For instance, at Peking a liang (taël) of silver is worth 1,500 cash, at Dolon-nor 1,600, at Kalgan 1,800, at Ta-jing (in Kan-su) 2,900, and at Tonkir (also in Kan-su) 5,000. The enormous difference between the two latter towns is probably only temporary, and is caused by the excessive rise in price of every article of consumption in those districts after the Dungan desolation.

accompanied by every good wish for our happiness and success from our countrymen resident in that city, amongst whom we had passed our time so agreeably. Those pleasant days were now gone by, and in the bustle and anxiety of present arrangements we had little time even to think of the future, with all its hopes and fears.

In addition to the Cossack who had accompanied us from Kiakhta, another, attached to our embassy at Peking, was ordered to join our party. Both these men were only to remain with us temporarily, and were to be replaced by two others who had not yet arrived. Under these circumstances we could not at once enter the heart of Mongolia, and therefore determined to explore such parts of it as lie north of Peking in the direction of the town of Dolon-nor. Here I wished, in the first place, to acquaint myself with the nature of the hilly region which, just as at Kalgan, forms the border-land of the plateau, and secondly, to observe the spring flight of birds of passage. For the latter purpose, lake Dalai-nor was a convenient station, situated on the table-land itself, 100 miles north of Dolon-nor. From its shores we purposed again descending to Kalgan, changing our Cossacks for the newcomers whose arrival we expected about that time, and then turning westwards in the direction of the northern bend of the Hoang-ho. In order to burden ourselves as little as possible, we despatched part of our effects direct to Kalgan, only taking with us what was absolutely necessary for two months. Having been un-

successful in hiring a Mongol or Chinaman, even for so short a time, we started a party of four.

Our route first lay in the direction of *Ku-peh-kau*, which commands the pass through the Great Wall,[1] and is nearly seventy-seven miles north of the capital. At first the appearance of the country does not change; the level plain watered by the Peiho and its tributary the Cha-ho is thickly studded with villages, and small towns and hamlets recur frequently along the road-side; but on the second day the mountains, which had been hitherto hardly visible in the distance, appeared nearer, and thirteen miles from Ku-peh-kau we entered the outlying hills of this marginal range. It is somewhat different from that at Kalgan. The two chains, which we will call the Kalgan and Nankau ranges (after the towns at the foot of the passes by which they are respectively descended), unite towards Ku-peh-kau in a broad belt, which continues to form an outer barrier to the high plateau.

Ku-peh-kau is a small place enclosed on three sides by mud walls, while on the fourth it is shut in by the Great Wall. A little over a mile from the town stands a mud fort commanding the road to Peking through a small narrow defile. The mountains only really begin on the northern side of Ku-peh-kau.

Although early in March, the weather was warm and springlike in the plains; it was even hot during

[1] There is one other pass between Kalgan and Ku-peh-kau; it is closed by the fortress if a square mud wall is deserving of that name) of *Tu-shi kau*.

the day, and the thermometer registered 59° Fahr. in the shade. The Peiho was free of ice, and flocks of wild duck (*Anas rutila, A. boschas*) and merganser (*Mergus merganser* and *M. serrator*) could be seen. These birds and other varieties of waterfowl and wading-birds make their appearance here in numerous flocks in the first half of the month, not only in the environs of Peking, but even near Kalgan where the climate is sensibly colder. Not venturing to continue their flight to the north where the breath of spring has not yet made itself felt, they keep to the flooded fields, which at this season are irrigated by the agricultural Chinese. One fine clear morning the impatient flocks essay a flight over the high lands, but if met by cold or bad weather they again return to the warm plains, where day by day their numbers increase, till at length the expected hour arrives; the deserts of Mongolia are slightly warmed, the ice-bound soil of Siberia has begun to thaw, and flock after flock hasten to leave their confined quarters in a foreign land and wing their way towards their haunts in the distant north.

Beyond Ku-peh-kau in the direction of Dolon-nor the mountains form a belt 100 miles in width, composed of a number of parallel chains running east and west, of no great elevation,[1] yet often

[1] There are no very remarkable peaks, and the snowy *Peh-cha*, mentioned by the missionaries Gerbillon and Verbiest as 15,000 feet high, and by Ritter following them, is certainly not here. The statement of its existence was, however, contradicted by MM. Vassilieff and Semenoff as early as 1856. See the Russian edition of Ritter's 'Erdkunde von Asien,' translated by Semenoff, i. 292–295.

alpine in character. The valleys are not wide (about half a mile) occasionally narrowing into ravines, hemmed in by lofty rocks of gneiss and granolite. The road is crossed by several small streams, none amounting to rivers, with the exception of the Shandu-gol[1] or Luan-ho, which takes its rise on the northern slope of the mountains nearest to the plateau; and after flowing past the town of Dolon-nor forces its way through the entire range and debouches in the plains of China Proper. The steep hillsides were thickly covered with grass, and as we penetrated farther into the range, by brush-wood and trees; the latter chiefly consisting of oak, black, or more rarely white birch, ash, pine, and an occasional spruce.[2] Elms and poplars grow in the valleys. The commonest bushes were the evergreen oak, rhododendron, wild peach, sweet briar, and hazel.

Woods are only met with on the northern bank of the Luan-ho as far east as the town of Jehol,[3]

[1] Marked *Shangtu-gol* on D'Anville's map.—M.

[2] Dwarf limes are even more scarce.

[3] The name 'Jehol,' also pronounced 'Jehor' or 'Jeh-ho,' means 'hot-water,' after the springs in the neighbourhood. Ritter calls this place the Chinese 'Sans Souci,' probably on account of its delightful situation, salubrious climate, and for its being the favourite residence of the great Emperor Kien-Long. It was here that Lord Macartney's embassy was received in 1793. The town itself is large and imposing when you enter it, and contains about a quarter of a million inhabitants. It stands in a fruitful valley surrounded by mountains, on which are palaces, temples, and gardens. About a day's ride to the west are the Imperial hunting-grounds, set aside for the use of his dynasty by Kia-king, the grandfather of the late Emperor. The inscriptions on the gates of the walls and buildings are in four languages —Chinese, Manchu, Tibetan, and Mongol. ('Erdkunde von Asien,'

RUINS OF EMPEROR'S SUMMER PALACE.

the summer residence of the Emperor. These forests used formerly to be strictly preserved for the Imperial chase, but the death of Kia-king in 1820 while hunting put a stop to this amusement. Notwithstanding the foresters placed there to protect it, the timber is undergoing wholesale destruction and judging from what we saw, hardly a good-sized tree remained, the number of stumps evidencing recent and extensive fellings.

The only animal we found was the *pygarg* (*Cervus pygargus*); the natives, however, asserted that there were roe-deer and tigers. Pheasants (*Phasianus torquatus*), partridges (*Perdix barbata*, *P. chukar*), and rock-doves (*Columba rupestris*) were plentiful; woodpeckers (*Picus* sp.), buntings (*Emberiza ciodes* ?) and *Pterorhinus Davidii* more scarce. The ornithology was not very varied, perhaps because the season was not far enough advanced for the migratory birds.

This border district forms part of the circuit of Chen-tu-fu, and belongs to the province of Chihli.[1] Although outside the Great Wall, i.e. beyond the boundary of China Proper, its inhabitants are exclusively Chinese, not a single Mongol being found among them. The valleys are covered with villages or detached farm-houses,[2] surrounded by cultivated

i. 132–138. See also 'A Month in Mongolia,' 'The Phœnix,' ii. 114, 120.)—M.

[1] According to the most recent changes Chihli or Peh-chihli, the *northern* province, extends about fifty miles to the north of Dolon-nor, and ten to the east of Kalgan. See 'A Month in Mongolia,' 'The Phœnix,' ii. 113.—M.

[2] There are no towns here like those in China Proper; and we only passed two settlements, *Pu-ning-sha* and *Gau-dji-tun*.

fields. But they are so confined as to be ill adapted for human habitation, and some of the inhabitants are dreadfully disfigured by goîtres.

We passed numerous trains of carts, asses, and a few camels on the road, employed in the transport of rice and millet to Peking; large droves of swine were also being driven to the capital, pork being the favourite food of the Celestials. As we left behind the plains of China the climate gradually became colder, the thermometer at sunrise only marked 7° Fahr., but during the day it was warm, and snow had entirely disappeared, except on the northern slopes of the higher mountains.

The ascents are very gradual. Ku-peh-kau on the southern side of the mountains is only 700 feet above sea-level; while Dolón-nor, situated on the elevated plain, which spread out before us on issuing from the mountains, is 4,000 feet high. On the Mongolian side this region is sharply defined by an alpine chain which, as the inhabitants told us, extends a long distance to the north, and is probably the great Khingan range, separating Manchuria from Mongolia. Where we crossed, only one side of the range—that towards the mountains, is fully developed; on the other the wild scenery is suddenly transformed into low, rounded hills; vegetation undergoes as marked a change in the absence of trees and bushes. No more bold cliffs and pointed peaks, but in their stead vast uneven plains surround the spectator, where the marmot, the antelope, and the Mongol lark reappear.

On March 29th, we arrived at the town of Dolon-nor, which, according to my observations of the Polar star, lies in 42° 16′ north latitude.[1] Followed by a gaping crowd, we marched through the streets for a long while in search of a night's lodging, but were refused admittance at every inn on the pretext of there not being room for us. Exhausted by the length of our march, and chilled to the bones, we determined to follow the advice of a Mongol and seek shelter at a temple. Here they gladly received us, and placed at our disposal a house where we could warm ourselves and rest after our fatigues.

Dolon-nor, or, as the Chinese call it, Lama-miau,[2] like Kalgan and Kuku-khoto, is an important place of trade. Hither the Mongols drive their cattle, and bring wool and skins to barter for brick-tea, tobacco, cotton, and silk. The town is not walled, but stands in a barren sandy plain watered by the Urtin-gol, a tributary of the Shandu-gol. The Chinese quarter is rather over a mile in length by about half a mile in width; its population is large, but the streets are narrow and dirty. The Mongolian quarter, distant half-a-mile from the former, contains two large temples standing close together, surrounded by houses,

[1] According to the observations of the Jesuits, Dolon-nor is situated in 0° 11′ 50″ longitude, west of Peking, and 42° 25′ north latitude. (See Klaproth's note in 'Timkowski's Travels,' i. 206); but Fritsche, director of the Peking Observatory, has calculated the latitude to be 42° 16′ 48″. See Dr. Bushell's 'Notes of a Journey outside the Great Wall of China,' J.R.G.S., vol. xliv. p. 81.—M.

[2] The Chinese name, Lama-miau, means 'lama monastery;' the Mongol name, Dolon-nor, signifies 'seven lakes,' which actually existed at one time near the town, but are now covered with sand-drift.

inhabited by about 2,000 lamas, whose numbers in summer are greatly augmented by the arrival of pilgrims. Near these temples stands a school for boys destined to become lamas.

Dolon-nor is remarkable for its foundry of idols and other religious appurtenances, which are despatched hence all over Mongolia and Tibet. The images are of cast iron or bronze, of various shapes and sizes, and are wonderfully executed, considering that they are all made by artificers working in separate houses.

We remained here a day and then started for Lake *Dalai-nor*, 100 miles to the north. Our road soon crossed the Shandu-gol, near the ruins of an ancient town known to the Mongols under the name of *Tsagan-balgas*,[1] signifying 'White Walls.' Nothing remains except a half-ruined quadrilateral brick wall ten to fourteen feet high, inclosing an area about a quarter of a mile in length by about 200 yards wide, which has the appearance of a field without any visible trace of habitations. The Mongols could tell us nothing of its past history.

Twenty-seven miles beyond Dolon-nor we entered the aimak (principality) of Keshik-ten;[2] from

[1] This was a favourite resort of the Mongol emperors; Marco Polo relates that Kublai-khan had a summer residence here, which he used on his hunting excursions to the neighbouring plains and lakes. Gerbillon mentions that the Emperor Kang-hi, during his campaigns against the Oliuths in 1696, built a small square fortress here—*Tsagan Balgassu*—the ruins of which are perhaps those mentioned in the text. ('Erdkunde von Asien,' i. 124–141, and Yule's 'Marco Polo,' i. 260–269. See also, 'Timkowski,' i. 269.)—M. [See Supplementary Note.]

[2] Keshik-ten is the Mongol for 'happy,' a name which they told us

this point of the road a succession of sandy hillocks, called by the natives *Guchin-gurbu*, i.e. thirty-three, extends as far as Dalai-nor. This name probably denoted the countless number of the hills, which vary in height from thirty to fifty, and in some instances 100 feet, and lie in close proximity to each other without any regularity. They are chiefly sand, in some places quite bare, but more frequently covered with grass or willow bushes, interspersed with an occasional oak, lime, and black and white birch. Quantities of hares and partridges are found in the underwood; pygargs and wolves in smaller numbers. We passed an occasional valley suited to cultivation, but the Mongol encampments were rare owing to the scarcity of water, although an occasional Chinese village might be seen. The numerous cart-tracks of Chinese, who come here from Dolon-nor to obtain wood for fuel, cause one easily to lose one's road without a guide, which happened to us several times during our first day's journey among the Guchin-gurbu. There are no landmarks to steer by, one hill is exactly like another, and as soon as you have ascended one, dozens more, all as though cast in the same mould, rise up in front of you. The Mongols say that these hills begin at the sources of the Shara-muren and continue for upwards of 150 miles to the west of Dalai-nor.

No sooner had we reached the shores of this lake than we witnessed the magnificent sight of a

was given it because in dividing Eastern Mongolia into the present aimaks it was the last that remained.

steppe fire. Although we had seen many such conflagrations in the mountains on the border, purposely lighted by the inhabitants to consume last year's withered grass, this spectacle far surpassed any we had yet beheld.

Towards evening a small light was visible on the horizon, which in the course of two or three hours became a long line of fire advancing rapidly across the open plain. A solitary hill in the centre was soon enveloped in flames, and appeared like a great building burning above the rest. The heavens were cloaked with clouds refulgent with a purple glow, which threw a lurid glare far and wide over the steppe; columns of smoke rose in fantastic shapes till they were lost to the eye in a confused, indistinct mass. In the foreground lay the vast plain lighted up by the burning belt; behind, the darkness of night, which seemed blacker and more impenetrable than ever; the lake resounded with the loud cries of startled birds, while all was still and quiet on the plain.

Dalai-nor[1] lies to the north of the hills of Guchin-gurbu, and is the largest of the lakes of South-east Mongolia. In shape it is a flattened ellipse with an axis elongated from north-east to south-west. Its western shore is indented by several bays, but the remainder of its coast-line is almost unbroken. Its water is salt, and, according to the natives, very deep; but we could hardly believe this statement,

[1] The translation of its Mongol name is 'lake-sea.'

because at a distance of several hundred paces from the shore its depth is not more than two or three feet. It is about forty miles in circumference, and is joined by four small streams: the *Shara-gol*[1] and *Gungir-gol* on the east; the *Holeh-gol* and *Shurga-gol* on the west. The lake abounds in fish, of which we caught three kinds, *Diplophysa* sp., *Squalius* sp., and *Gasterosteus* sp.[2] In summer the fish enter the mouths of the streams in large numbers; and in early spring several hundred Chinese, mostly houseless vagrants, make their appearance on its shores for the purpose of fishing, and remain till late in the autumn.

On the north and east it is bordered by saline plains, and on the west by rolling steppes; the hills of Guchin-gurbu closely approach its southern shore. Here stands a small group of hills, at the foot of which is the temple of Darhan-ula and a Chinese village. The inhabitants of the latter trade with the Mongols, who come here in large numbers during the summer for religious worship, and sometimes buy live fish from the fishermen, returning them to the lake in order to atone for their sins.

Dalai-nor lies at an elevation of 4,200 feet above the sea, its climate is, therefore, as rigorous as the rest of Mongolia. In the middle of April its shores were still frozen, and the ice on the lake itself is

[1] According to the Mongols this river flows out of lake Hanga-nor, about thirteen miles to the east of Dalai-nor; at its mouth there is a good-sized marsh, the only one at Dalai-nor.

[2] We could not catch more because the lake was still frozen, and there were very few fish in the rivulets.

three feet thick. It does not entirely thaw till the first half of May.

Situated in the midst of the arid plains of Mongolia, Lake Dalai-nor serves as a great *rendezvous* for migratory birds belonging to the orders *Natatores* and *Grallatores*. In the beginning of April we found large numbers of ducks,[1] geese,[2] and swans[3] here; divers,[4] gulls,[5] cormorants,[6] less numerous, as were also cranes,[7] herons,[8] spoonbills[9] and *avosets*.[10] The two latter kinds and others belonging to the same order (*Waders*) first appeared in the second week of April; birds of prey and small birds were very scarce.[11]

For a detailed description of the flight and habits of these birds I must refer the reader to the second volume of this work,[12] which will be especially devoted to the Ornithology; for the present I will only add that all birds of passage hasten their flight across

[1] The most numerous of the ducks were *Anas boschas*, *A. crecca*, *A. glocitans*, *A. acuta*, *A. falcata*; less numerous were *Anas rutila*, *A. tadorna*, *A. clypeata*, *A. pœcilorhyncha*, *A. strepera*, and *Fuligula clangula*.

[2] *Anser segetum* was most common; *A. cinereus*, in sufficient numbers; *A. cygnoides* and *A. grandis*, rare.

[3] *Cygnus musicus* and *C. color*. The former were the most numerous, although the latter were also seen in considerable numbers.

[4] *Mergus merganser*, *M. albellus*, *M. serrator*—not many.

[5] *Larus ridibundus* and *L. occidentalis*?

[6] *Phalacrocorax carbo*.

[7] *Grus monachus* and *G. leucauchen*, the latter rare.

[8] *Ardea cinerea*.

[9] *Platalea leucorodia*.

[10] *Recurvirostra avocetta*.

[11] The most numerous of the birds of prey were *Milvus Govinda* and *Circus rufus*.

[12] This will not form part of the present translation.—M.

the deserts of Mongolia, for on cold, stormy days the lake was crammed with ducks and geese, but no sooner did the weather improve than it proceeded rapidly to empty, until a fresh flight took place.

The violent and cold winds prevalent on Dalai-nor were a great hindrance to our shooting excursions; however, we killed duck and geese enough to provide ourselves with food, sometimes more than sufficient for our wants, but we shot for the mere love of sport; for the swans, which were very shy, we almost always used the rifle.

After passing thirteen days on the shores of the lake, we retraced our road to Dolon-nor, in order to proceed thence to Kalgan. The hills of Guchin-gurbu appeared as uninteresting as ever, but their stillness was occasionally enlivened by the beautiful notes of the flesh-coloured stonechat (*Saxicola Isabellina*), met with throughout the whole of Central Asia; it not only utters its own notes, but borrows those of other birds, imitating them very sweetly. We have heard it mock the cry of the kite, chatter like a magpie, scream like a curlew, sing like a lark, and even try to mimic the neighing of a horse.

Surveying in a country where there are so few landmarks was most difficult, indeed, it was always very troublesome work to combine the accuracy and secresy which were alike indispensable. Had the natives, particularly the Chinese, discovered that I was mapping their country, our difficulties would have been doubled, and we should have found it next to impossible to pass through the populous districts.

Fortunately I was never surprised with the map, and no one ever knew that I was sketching my route.[1] My surveying instrument was a Schmalkalder compass, which is usually fixed on a tripod stand; but as this would have excited suspicion and interfered with the success of the expedition, I determined to do without it, and steadied the compass in my hands. If the needle continued in motion for more time than I could conveniently spare, I read off the mean degrees between the extreme points of oscillation. In measuring distances I reckoned by the number of hours of travel and our rate of progress.[2] The scale of my map was 10 versts to the inch. I carried a small field-book for noting all conspicuous objects, as it is never safe to trust to one's memory in such work, where accuracy is of the highest importance. At the end of every day's journey I transferred the field survey to my diary, keeping the map on ruled sheets carefully stowed away in one of the boxes.

My plan was this: After taking bearings in the direction we were going and noting the time by my watch, I drew a line in my pocket-book corresponding as nearly as possible with that of our march; at the end of it I entered the degrees and marked off the intersections with figures in their regular order.

[1] The scale of the map accompanying this translation is reduced to one-eighth of the scale of the original sketch map.—M.

[2] A pack animal averages two and a-half to three miles per hour, according to the nature of the ground. The rate of travel varies so much in a mountainous country that one has often to measure distances by the eye.

Then as we advanced I sketched in the country on either side, taking bearings of the more important objects only. When we altered our course, I calculated the distance we had come, made an entry of it in my note-book, and took fresh bearings for the new direction. This was sometimes difficult to determine when we had no guide; in such case I took several bearings, and afterwards underlined the bearing that proved to be the one followed. It often happened that I was prevented making an entry at any given place owing to our being watched by Chinese or Mongols: in such case I deferred it to a more suitable opportunity, reckoning the distance we had come backwards to the point of deviation. When travelling in a thickly populated district, some one or other of the inhabitants would be constantly with us. To avoid observation I would then ride in advance or remain behind the caravan; if a guide[1] were with us, we had figuratively to 'throw dust in his eyes,' which we usually managed in the following way. On first making the acquaintance of the new travelling companion I would show him my field-glass, explaining to him that I was in the habit of looking for game with it. The unsophisticated Mongol did not distinguish between the field-glass and the compass, and as we often shot antelope and birds he was fully convinced that I could discover their presence by looking into 'the artful machine.' In this way, time after time, I

[1] Every guide we had was of course a spy, with whom we had to be more on our guard than with the local population.

succeeded in deceiving the officials. When they pestered me with questions and were curious to know why I carried a compass, I would speedily substitute the field-glass and place it before them, as I always had it with me during the march.

Sometimes it would be necessary to take compass bearings when a number of these inquisitive fellows were watching. My companion would then try and divert their attention whilst I was thus occupied. Numerous were the stratagems and artifices to which we were obliged to have recourse in fulfilling our task in the midst of a people who (in the case of the Chinese, at all events), were hostile to us.

On arriving at the halting place, after unloading the camels, pitching the tent, collecting argols, and doing other necessary work which we shared with the Cossacks, I would transfer to the ruled sheets of paper the survey of that day, taking the precaution of shutting myself in the tent and stationing a guard at its entrance to avoid interruption. But even then visitors would arrive and interfere with my work, which could not be resumed till they were got rid of, when I would finish and put it by till the following day.

I drew on the map the line of our march, marking all the settled habitations (towns, villages, houses, temples, but never nomad encampments), wells, lakes, rivers, and streams, however small, and lastly, mountains, hills, and the general outline of the country on both sides of our road. Important data

obtained by hearsay only were entered with an asterisk, to denote that they had not been verified by actual observation. To ensure accuracy in the map, I determined by means of a small universal instrument the latitude of eighteen important places.[1] The work of surveying, simple though it may seem, was one of our most arduous labours; for, independent of every device to escape notice, the frequent necessity for dismounting added greatly to our fatigues, especially in the heat of summer. Even in the hottest weather, instead of taking advantage of the cool nights, we often had to travel by day for the sake of our survey, in this way exhausting our own strength as well as that of our camels.

We continued our journey from Dolon-nor, where I only stopped to make a few necessary purchases, to Kalgan, a distance of 150 miles by a good road all the way. The traffic is very large, and numerous Chinese two-wheeled bullock carts passed us laden with all kinds of merchandise; salt is also transported by this road to Kalgan, from a salt lake (so the natives told us) 130 miles north of Lake Dalai-nor. Caravanserais stand by the road-side for the convenience of travellers; but we never made use of them, preferring a clean tent and pure air to the dirt and smells of Chinese inns, besides avoiding the impertinent curiosity of the Mongols or Chinese, who invariably crowded round us whenever we stopped near their habitations.

[1] Unfortunately, I could not fix the longitudes of the same points, even by means of chronometers, for we had none.

There are Chinese villages and numerous Mongol yurtas on the Dolon-nor road, and countless herds of sheep, cows, and horses in every part of the steppe.

Topographically, this region may be described as a series of vast uneven plains with a sandy, and, in some places, saline soil, but covered everywhere with rich excellent grass. There is an utter absence of trees or bushes, but streams and small lakes are more numerous here than in other parts of Mongolia. The water, however, in the latter is filthy; to have an idea of it, take a tumbler of water mixed with a tea-spoonful of dirt, flavour with a pinch of salt, add a little lime for colour and goose droppings for smell, and you will then obtain a liquid similar to that in most of the Mongolian lakes. The natives, however, far from showing any repugnance to this nectar, boil their tea in it the whole year round, and even we were fain to drink it for want of better. The great steppe country through which we passed on our way from Dolon-nor is the pasture land of the Imperial horses. Every herd (called *dargu* by the Mongols) of these animals numbers 500, and is under the charge of an officer, a superior functionary being placed over all. They supply the cavalry remounts in time of war.

Let us now say a few words about the Mongol horses. They are rather under the average height, their legs and neck thick, their head large, and their coat long and shaggy. They possess wonderful powers of endurance, remaining out in the open

in the extreme cold, and contenting themselves with the scanty herbage, or, if there be none, with budarhana and bushes, the food of camels. In winter the snow serves them for water; in fact, they will live where other horses would perish in a month's time. They roam almost at liberty over the pasture lands of Northern Khalka and the country of the Chakhars. The larger herds are usually broken up into smaller troops of ten to thirty mares, led by a stallion who guards them with the greatest jealousy, and never lets them out of his sight. The leaders often have pitched battles with one another in spring.

Mongols are passionately fond of horses, and will tell you their good points at a glance; their favourite amusement is horse-racing, and every summer they meet at some of the principal temples to indulge in this sport. The great race-meeting is held at Urga, attracting competitors for many hundreds of miles. The prizes are distributed by the Kutukhtu in person; the winner of the first prize receiving a quantity of cattle, clothes, or money.

The Imperial pasture lands are mostly in the principality (aimak) of the Chakhars,[1] whose territory extends upwards of 330 miles to the west of Keshik-ten till it touches that of the Durbutes. The Chakhars or Chinese-Mongols are divided into eight take it in turn to do military service. We have already remarked how completely they have lost the character and appearance of the true Mongols.

[1] These pasture lands extend almost as far as Kuku-khoto.

It was fortunate for us that we had no need of their services, for a greater set of knaves and rogues does not exist. Our tent was our house, and we lived on what we shot. Antelope were plentiful, we had no lack of meat, and were never constrained to buy a sheep, for which we had to pay through the nose, if it were not, as often happened, absolutely refused. The fear inspired by our guns and revolvers was a protection against thieves; our skill in shooting birds on the wing, or bringing down antelope with the rifle at long distances, instilled into them a wholesome dread, and every robber knew that he would pay the penalty of his life if caught in the act of stealing.

The temperature in spring in South-eastern Mongolia was cold, with constant winds and a dry atmosphere.

The night frosts continued as late as the early part of May. On the 2nd of that month the surface of a small lake near which we were encamped was covered at sunrise with ice an inch thick, strong enough to bear a man's weight. Sudden changes in temperature occur even later, as we shall have occasion presently to remark.

North-westerly gales prevailed almost without intermission during spring. It was seldom, and only for a few hours, calm. The violence of the wind, generally accompanied by cold, was very trying, and we now fully realised the true nature of these steppes. Clouds of sand and dust, mixed with fine particles of salt from the marshes, filled the air, dark-

ening the sun's rays, which shone dimly as if through smoke; sometimes they were entirely obscured, and it was twilight at noon. Hills half a mile off were invisible; and large particles of sand were driven with such force by the wind, that even the camels accustomed to the desert would turn their backs to the storm and wait till its fury had abated. We could not keep our eyes open when facing it; our heads ached, and there was a singing in our ears as though we were in the throes of suffocation. Everything in the tent was thickly covered with dust; and when it had been blowing hard all night we could hardly open our eyes in the morning for the layer of dirt which covered them. Now and then, in the intervals between the squalls, hail and rain would come in buckets-full, driven into the finest sleet by the force of the gale. After a few minutes of this, there would be a lull for a quarter of an hour, succeeded by another hurricane and another downpour of rain. Although our tent was fastened to the ground with twelve iron pegs, each more than a foot long, it seemed about to be torn up every minute, and we were obliged to secure it to the packs with all the ropes we had.

The total quantity of rain and snowfall is, however, small; very little, if any, occurring in March and April.

The constant frosts and winds on these high plains during the spring delay the flight of birds and retard vegetation. Towards the end of April the young grass certainly begins to shoot up under the

influence of the sun's warmth, and an occasional little flower bursts forth, but nature is in general still inanimate at this season. The appearance of the steppe is but slightly changed from what it was in winter, except that the withered grass is transformed by the spring conflagrations into a sable shroud. Spring in these regions is unaccompanied by any of those delights which herald its approach in more temperate climates. Birds of passage shun these cheerless plains, where they can find neither food, nor drink, nor shelter. If a flock now and then rest in its flight on the shore of some lake, it is only for a while, soon to depart on its way to more favoured haunts in the north.

I will conclude this chapter with a description of the Camel, the most characteristic and remarkable animal of Mongolia. The constant companion of the nomad, and often the source of his prosperity, it is invaluable to the traveller who crosses the desert. For three years we were never separated from our camels, watching them under all circumstances; we had therefore ample opportunity of studying their nature and habits.

The two-humped or Bactrian camel is characteristic of Mongolia, where the one-humped species common in Turkestan is unknown. The general Mongol name for it is *Timeh*; the entire camel is called *Burun*; the gelding *Atan*; and the female *Inga*. Its good points are—a well-ribbed body, wide feet, and high upright humps[1] far apart. The

[1] A camel's hump is sometimes broken; in such case it will not stand erect but that does not matter, provided it be hard and large.

first two qualities denote strength; the last, i.e. the upright humps, show that the animal is fat, and can withstand a long journey in the desert. A very tall beast is not necessarily a good one; moderate size, with all the above points well developed, is better than great height. However, if it be well proportioned, the larger it is the better.

The largest and best camels, endowed with great powers of endurance, are bred among the Khalkas. Those of Ala-shan and Koko-nor are much smaller and weaker; the latter are also distinguished by their shorter and thicker muzzles, and the former by the darkness of their hair; peculiarities so marked as almost to form a distinct breed of the camels of Southern Mongolia.

The boundless steppe or desert is the home of the camel; here, like its master, the Mongol, it can be perfectly happy. Both the man and the beast shun fixed abodes. Confined in an enclosure, although supplied with an abundance of the best food, the camel will pine and die; excepting, perhaps, a few kept by the Chinese to transport coal, corn, or other loads. But they are poor, miserable creatures, compared with their fellows of the steppe; and even they will not bear confinement all the year round, and must be let loose in summer to pasture on the neighbouring plains and recruit their strength.

The habits of the camel are very peculiar. It is anything but dainty in its food, and may serve as a model of moderation; but this is only true on the desert: take it to pasturage such as we have at

home, and instead of becoming fat it grows leaner every day. We experienced this with ours in the rich meadows of Kan-su; and the merchants at Kiakhta, who had tried keeping them for the transport of tea, told us the same thing. In either case they deteriorated for want of the food to which they had been accustomed. The favourite food of the camel here consists of onions and budarhana (*Kalidium gracile*); in Ala-shan, dirisun, scrub wormwood, zak or saxaul (*Haloxylon* sp.) and kharmik (*Nitraria Scoberi*)—particularly when the sweet, brackish berries are ripe. It cannot thrive without salt, and eats with avidity the white saline efflorescence called *gudjir*, which covers all the marshes, and often exudes from the soil on the grass steppes of Mongolia. If there be none of this, it will eat pure salt, which, however, is not so beneficial, and should only be given twice or thrice a month. If kept without salt for any length of time camels will get out of condition, however plentiful food may be, and they have been known to take white stones in their mouths mistaking them for lumps of salt. The latter acts on them as an aperient, especially if they have been long without it. The absence of gudjir and saline plants probably explains the reason why they cannot live in good pasture lands in a hilly country, to say nothing of the want of a desert to roam over in summer.

We ought also to mention that some camels are omnivorous, and will eat almost anything; old bleached bones, their own pack saddles stuffed with

straw, straps, leather, &c., &c. Ours once ate up some gloves and a leathern saddle belonging to our Cossacks; and the Mongols told me of camels which had been without food for a long while, and which devoured an old tent of their master's in the coolest manner possible. They will even eat meat and fish; ours stole meat we had hung up to dry; one voracious brute actually made off with the birdskins ready for stuffing, and relished dried fish and the remains of the dogs' food; but this was a singular instance, and his eccentric tastes were not shared by the others.

Camels at pasture appease their hunger in two or three hours, after which they lie down and rest, or wander about the steppe. They cannot go without food for more than eight or ten days, nor can they go without water in spring and autumn for more than seven, requiring it in the height of summer every third or fourth day. Much, however, depends on the powers of endurance of the particular animal; the younger and fatter it is, the longer can it exist without nourishment. It only happened to us once during the whole course of the expedition, viz. in November 1870, to keep our camels without water for six consecutive days, notwithstanding which they went well; in summer they were never more than forty-eight hours without it. At this season they should be watered daily, but in spring and autumn every second or third day is quite sufficient, and in winter snow answers the same purpose.

The intelligence of camels is of a very low order;

they are stupid and timid. A hare starting from beneath their feet has been known to throw a whole caravan into confusion; and a large stone or heap of bones to cause them to bolt altogether. If the saddle or load roll off its back the camel is terrified, and runs in any direction, followed by its companions; and when attacked by a wolf it never attempts to defend itself, although one blow from its powerful foot would kill its enemy; it only cries and spits, expectorating the chewed food with the saliva, a proof of the terror which takes possession of it. When angry it will also strike the ground with its hoof, and curl up its unsightly tail. Malice indeed is not in its nature, probably on account of its apathetic temperament; but the males become vicious during the rutting season, which is in February, and they will then fight with one another, and sometimes attack mankind. The interference of man is needed to bring the sexes together. The period of gestation is thirteen months, at the expiration of which the dam gives birth to one, or as an exception two, foals.[1] Human assistance is also required at the time of parturition. The newborn camel is the most helpless creature imaginable; it must be lifted by hand and placed under the mother's teats; but as soon as it can walk, it follows her about everywhere, and the latter is so attached to her offspring that she cannot bear to be separated from it.

The young camel enjoys but a short period of

[1] The female camel is granted its liberty for a whole year after parturition, so that it only foals every other year.

liberty. When a few months old it is tied near the yurta to separate it from the mother, which is then regularly milked by the Mongols. In the second year of its existence, its nostrils are slit and a short wooden stick inserted, to which a rope (*burunduk*) is afterwards fastened which serves as a halter. It is then taught to lie down at the word of command, by being pulled by the burunduk while the word '*sok, sok, sok,*' is repeated. In its third year it is taken with the caravan to accustom it to travel in the desert; at the age of three it may be ridden; at four it is strong enough to carry a small load; and at five it is quite fit for work.

A camel can bear a load till old age, i.e. to twenty-five and upwards; between five and fifteen it is considered in its prime. It will live upwards of thirty years, and under favourable circumstances to forty.

In loading it, the saddle is first fastened on its back, and afterwards the pack placed upon it. In the Khalka country six or eight pieces of felt are used to wrap round the back and humps underneath the saddle, a light wooden framework is then laid over these to take off the pressure of the packs.[1] In Northern Mongolia bags filled with straw (*bambai*) are used instead of felt, the woodwork being the same. Great care must always be taken in loading camels, otherwise they are apt to get sore backs and

[1] The pack is always securely fastened to the saddle with ropes; except in the case of tea chests, which are simply slung over the saddle.

become unfit for work. The Mongols wash the wounds with brine or the like, and sometimes let their dogs lick them. In summer when flies lay their eggs in the sore, the healing process becomes very tedious.

Before the departure of the caravan in autumn the camels which have been at grass all summer, and have put on too much flesh, are prepared for work by being fastened by their halters to a long rope stretched along the ground and secured at the ends to two poles driven firmly into the ground. In this way they are kept standing without any food for ten days, or even more,[1] only receiving a little water every third or fourth day: this hardens them and takes down their spare flesh.

The average load of a camel is about 4 cwts., or four chests of tea each weighing 1 cwt. Entire camels (*buruni*) can bear 5 cwts., and have to carry an additional fifth chest; but they are not numerous, and are mostly reserved for the stud, as they are less tractable, and therefore not so serviceable for transport, as either geldings or mares.

The size of the load is not less important than its weight. A large unwieldy pack offers too much resistance to the wind and retards the progress of the animal; while, on the other hand, a small heavy one injures its back, the pressure being too great in one part of the saddle; thus more than $2\frac{1}{4}$ cwts. of silver

[1] One of our Kalgan merchants assured me that he has kept his camels in this way without food (only watering them every other day), for seventeen days.

is never put on a beast which carries with ease 4 cwts. of tea. Laden camels average twenty-eight miles a day, a rate of progress which can be kept up for a month. After ten days or a fortnight's rest the caravan is ready for another journey; working in this way all through the winter, i.e. for six or seven months. At the end of that period the camels grow very thin, and are given their liberty for the whole summer; this holiday and the run of the steppe restores their strength, but without it they would not last more than a year. The reason of our losing so many was the necessity for driving them continuously without ever resting them.

In March they begin shedding their coats, and at the end of June the hair has entirely disappeared, leaving the skin quite bare; at such times they are susceptible to cold, rain, and every change of weather; they are weak, and a small load soon galls their backs; but before long a fine, short, mouse-like hair begins to cover their whole bodies, and by the end of September the new coat is fully grown. The males, especially the stallions, then look their best, with long manes and tufts of hair underneath the neck, and below the knees of the fore legs.

On a winter journey the camels are hardly ever unsaddled; but on arriving at the halting place are at once let loose to graze. In summer and hot weather the saddles must be removed every day, yet with every care and precaution sore backs cannot be always avoided. Nothing will induce an experienced Mongol to undertake a journey on

camels in the hot season; our objects were of course different, and we consequently injured many of our animals.

The camel is a sociable beast, and will not forsake a caravan as long as it has strength to keep up. If from exhaustion it stop and lie down no blows will make it rise again, and it is generally left to its fate. The Mongols, however, sometimes ride to the nearest yurta and give their tired-out animal in charge of its inhabitants; when, if supplied with food and drink, it will in a few months regain sufficient strength to move about.

A camel which has fallen into a swamp is injured for life and soon grows thin; but accidents of this kind are rare in Mongolia, where there are so few marshes. After rain camels cannot keep their footing in clayey soil, slipping on the flat soles of their feet and sometimes falling; but they are invaluable in a mountainous country, as we ourselves experienced in the highlands of Kan-su, where we accomplished 330 miles each way, including eight passes, all upwards of 12,000 feet above sea level; the camels certainly suffered a great deal, but what we have said proves at least that they may be taken over any alps. The road to Lhassa across Northern Tibet ascends and descends passes 16,000 feet high, and even upwards, yet these beasts accomplish the journey, although they frequently perish from the rarefaction of the atmosphere. Camels which have been at such heights are considered spoilt for ever, and the Mongols say never recover on the lower pasture

lands of the Khalkas. On the other hand, the camels from the latter country thrive perfectly at Koko-nor, which is twice the elevation, and soon eat their fill on the saline meadows near the lake. In summer camels roam over the steppe unguarded, only coming once a day to their master's well for water. On a journey they are picketed for the night in a row near the tent; in winter when frost is very severe the drivers sleep with them to keep themselves warm; on the road they are tied to one another by their burunduks, and these must never be knotted, lest the animal should tear its nostrils by a sudden movement to one side, or by a step backwards.

Camels are also ridden or driven in carts. In riding the same kind of saddle as that used for horses is put on their backs; the rider mounts, and orders the animal to rise. In dismounting the camel is in general made to kneel down, but the rider may jump from the stirrup when in a hurry. Its paces are a walk or a trot, never a gallop or a canter; some will trot as fast as a good horse can gallop, and you may ride a camel seventy miles a day for a week.

Besides serving as a beast of burden and for riding, the camel supplies the Mongol with wool and milk; the latter is as thick as cream, but sweet and disagreeable; the butter made from it is far inferior to ordinary butter, and is more like boiled fat. The hair is spun into rope, which is mostly sold to the Chinese. The wool is obtained by shearing the animal when it begins to shed its coat, i.e. in March.

With a constitution as strong as iron, the camel is so accustomed to a dry atmosphere that it fears damp. After ours had lain a few nights on the moist ground in the Kan-su highlands, they caught cold and began coughing; their bodies too were covered with nasty boils; and if we had not gone on to Koko-nor, in a few months they would all have died, a misfortune that actually befell a lama who arrived in Kan-su with his camels at the same time as we did. The commonest form of illness to which they are subject is the mange, *homun* in Mongol. The sick beast is gradually covered with festering sores, loses its coat, and at length dies. Glanders is another malady from which they occasionally suffer. The treatment adopted by the Mongols in the former case is to pour a soup made from goats' flesh down the animal's throat, and to rub its sores with burnt vitriol, snuff, or gunpowder. At Koko-nor rhubarb is the universal remedy for camels as well as for all domestic animals, but the Mongols like to make a mystery of their medicines. In damp weather camels are very liable to coughs: the best remedy in such cases is to give them tamarisk bushes to eat, which grow abundantly in the valley of the Hoang-ho, and in other parts of Southern Mongolia.

On long journeys, particularly in those parts of the Gobi where there is a quantity of small shingle, they often become footsore, and in a little while quite unable to walk; the Mongols then cast the lame animal, and sew a piece of thick leather under the worn sole; a painful operation for the poor brute,

because holes must be bored right through its foot with a thick awl in order to sew the leather on firmly; but when once this has been done, it soon recovers from its lameness and is fit for use.

On May 6th we again stood on that point of the marginal range of Mongolia where the descent to Kalgan commences. Again the grand panorama of mountain scenery lay at our feet, the bright green plains of China sparkling like emeralds in the distance. There it was warm and springlike, here on the plateau Nature was only just waking from her long winter's sleep. At every step in the descent we became more sensible of the warmth of the plains; at Kalgan itself trees were in full leaf, and we gathered thirty kinds of flowering plants in the neighbouring hills.

CHAPTER IV.

THE SOUTH-EASTERN BORDER OF THE PLATEAU OF MONGOLIA—*(continued)*.

Reorganisation of the Party—Fresh start from Kalgan—R. C. Missions—Samdadchiemba, Huc's companion—Dishonest convert—Vigilance needed against thieves—Shara-hada Range—Suma-hada Range—The Argali; its habits and incidents of chase—Late spring—Lifeless aspects—The Urute country and Western Tumites—Tedious purchase of sheep—Dumb bargaining—Difficulties in purchase of milk—Our traffic with the Mongols—Throw off the trading character with advantage—Rude treatment from Chinese—The strong hand necessary—Difficulties about change—The Inshan mountain system—First sight of Hoang-ho—Tent flooded—Bathar Sheilun temple—The mountain antelope—Its extraordinary jumps—Chinese soldiers—Munni-ula mountains—Their flora, fauna, and avi-fauna—Legends regarding them—Ascent of the range—Chinese demand for stags' horns—Vicissitudes of mountain sport—Impressive scenery—Pass across range—Valley of the Hoang-ho—City of Bautu—Interview with commandant—Search for lodging—Mob rudeness—We are made a show of—Departure from Bautu—Passage of the Hoang-ho—Military opium smokers.

OUR two months' journey in South-eastern Mongolia accustomed us to the style of travel, and in some measure to the conditions, under which our future wanderings would be prosecuted. The hostility shown by the population towards us on more than one occasion precluded the hope of our finding friends, and taught us to rely entirely on ourselves. The magic effect which even the name of a European produced on the cowardly natives, hopes of ultimate success, and confidence inspired by courage, these

were the motives which impelled us onwards at all hazards, regardless of probabilities or possibilities.

At Kalgan we reformed our caravan. Two new Cossacks appointed to our expedition joined us here, and our former companions returned home. One of the new Cossacks was a Buriat, the other a Russian; the former was to act as interpreter, the latter as steward. They had also to assist us in loading and pasturing the camels, saddling the horses, pitching the tent, collecting argols for fuel, &c. &c., all which formed part of every day's work, and became the more burdensome as it encroached on the time available for scientific pursuits. However, it was impossible to arrange differently, because, as I have already explained, I could not afford to take more than two Cossacks, and the services of a Chinese or Mongol were unobtainable at any price.

The number of our pack-camels was increased by the purchase of a new one, making altogether eight camels, and two horses. Mr. Pyltseff and I rode the latter, the Cossacks bestrode two camels, and the remaining six carried our baggage, which, I should think, weighed about 16½ cwts.; the setter dog, 'Faust,' completed our small caravān.

When all our preparations were concluded, my friend and I despatched our last letters home, and on the 15th May once more mounted the plateau of Mongolia. The following day we turned off the Kiakhta road to the left, taking a westerly direction by the post road to Kuku-khoto. For three days we travelled over an uneven plain occupied by encamp-

ments of Mongols, and further on by Chinese, who are scattered all over the south-eastern border of Mongolia. These settlers buy or hire arable land from the Mongols, and their numbers increase year by year in proportion as the cultivated soil encroaches more and more on the ancient domain of the inhabitants of the steppe,—the Mongol, his herds, and the swift-footed antelope.

At the Chinese village of Siyinza, where the Roman Catholics have established a missionary station,[1] we unexpectedly met one of the priests in charge, who gave us a warm reception, and by his invitation we accompanied him the following day to visit his colleagues residing at El-shi-siang-fu, twenty-seven miles to the south, who were equally courteous. In some conversation we had with them, they complained that Christianity made very slow progress among the Mongols, who are fanatical Buddhists; they told us that they were more successful with the Chinese, although even among the latter, proselytes were mainly attracted by material advantages. The corruption and immorality of the people exceeded all description. These missionaries had built a school to train Chinese lads to assist them in their work, maintaining them at their own cost, as they found this to be the only way of inducing the parents to entrust their children to them. They had recently established themselves here, and intended

[1] There were three missionaries at this station—two Belgians and a Dutchman—at the time of our visit; a fourth was added to their number in the end of 1871.

building a church and house for themselves; ten months later, on our return, we actually found that a good-sized two-storied dwelling had been completed in our absence, and was inhabited by all three priests. There are four stations in South-eastern Mongolia, besides Siyinza, occupied by Roman Catholic Jesuit missionaries; one at the village of Sivanzi,[1] about thirty miles north-east of Kalgan, another at Jehol, a third to the north of Newchwang, and a fourth at the sources of the Shara-muren, near the 'Black Waters,'[2] whence Huc and Gabet started in 1844 on their journey to Tibet.

At El-shi-siang-fu we saw *Samdadchiemba*, the former companion of Huc. His real name is *Seng-teng-chimta*, and he is of mixed Mongol and Tangutan race. He is fifty-five years of age, and enjoys excellent health; he related some of his adventures to us, and described the different places on the road, but he declined our invitation to accompany us to Tibet, excusing himself on the score of old age.

By the advice of the missionaries we hired at Siyinza, at five lans (*27s. 6d.*) a month, a Mongol Christian convert to attend to our camels and to help our Cossacks with their work; we also anticipated benefit from his services as interpreter of Chinese, with which language he was well acquainted. Our expectations regarding him, however, soon proved illusory, for after the first day's march

[1] This is probably the small village of Si-Wang mentioned by Huc as a Christian Chinese station, north of the Great Wall, one day's journey from Siuen-hwa-fu, i. 3.—M.

[2] In Chinese He-shui, i.e. Black Waters (*Ibid.*).

he deserted, carrying off one of our knives and a revolver. This happened during the night, and he had probably laid his plans beforehand, as he did not take his clothes off when he turned in to sleep with the Cossacks.

I determined to give the missionaries warning of their convert's behaviour, and accordingly rode back to Siyinza and related the whole affair to them. They promised to exert their utmost to catch the thief, whose mother served them as cowkeeper; indeed, before we had gone much further, a Chinaman overtook us, bearing the revolver which had been found on the delinquent; who, reckoning upon our departure, had returned to his yurta a few days afterwards.

This was a salutary lesson and caused us to be more than ever distrustful of the inhabitants. Henceforward to guard against nocturnal robbers we resolved to keep watch in turns, my companion and I relieving one another every two hours till midnight, when the Cossacks took their turn till dawn. This was harassing work after the fatigues of the day, but it was necessary, at all events during the early part of our journey, surrounded as we often were by a hostile population. Our strength lay in watchfulness, for we knew that these cowards would never attack openly four well-armed 'foreign devils.'

We continued to post night-sentries for a fortnight longer, after which we contented ourselves with sleeping with our guns and ammunition ready to hand.

In consequence of the information derived from the missionaries at Siyinza, we determined, instead of passing through Kuku-khoto, to take a direction north of this town to the great wooded mountains overlooking the Hoang-ho. This change in our plans was the more agreeable as it enabled us to proceed at once to a country abounding in objects of the greatest value to the scientific observer, and to avoid visiting a Chinese town, where the rudeness of the people always caused us great annoyance.

After passing the small temple of Chorehi[1] mentioned by Huc, we skirted lake Kiri-nor,[2] and leaving the Kuku-khoto post-road,[3] turned to the right. On the opposite side of a vast plain which now lay before us, we could distinguish a range of mountains known to the Mongols under the name of Shara-hada, i.e. Yellow range, probably from the quantity of limestone rock of which their outer cliffs are formed. Their elevation above the adjacent valley of the Kiri-nor is not more than 1,000 feet, but their steep ascents on this side are in striking contrast with the table-land of the remainder of the range, which abounds in rich pasturage, where even the dzeren is found. The opposite (western) side is less precipitous, though some of its slopes are very steep. The breadth of the range in the part we

[1] Huc, i. 125.

[2] Lake Kiri-nor dries up in summer. Seven miles to the north-east of it the remains of some ancient walls may be seen; in the same valley nearer the Shara-hada mountains we saw another wall, probably once forming a boundary.

[3] The post stations are kept by Mongols.

crossed is about seventeen miles, and its general direction south-west and north-east.

In a narrow rocky belt extending along the south-eastern border of the Shara-hada mountains bushes are plentiful; the prevailing kinds being the hazel (*Ostryopsis Davidiana*), the yellow briar (*Rosa pimpinellifolia*), the wild peach (*Prunus* sp.[1]), and the spiræa; the barberry (*Berberis* sp.), currant (*Ribes pulchellum*), cotoneaster, honeysuckle (*Lonicera* sp.), and juniper (*Juniperus communis*), are more rare. Here we found, for the first time in Mongolia, a number of insects, and my companion made some important additions to his entomological collection.

The Suma-hada,[2] another and a wilder range, about thirty miles distant, lies parallel with that just mentioned. But even here the precipitous cliffs and deep valleys are only developed on the margin of the range; the inner slopes being of softer and more gradual outline, with rich pasture and arable land partly cultivated by Chinese.

The height of the Suma-hada[3] above sea-level is greater than that of the Shara-hada, but their elevation above the plain is nearly the same. Their cliffs, exclusively composed of granite, are rounded and worn down by glacial action, of which there are unmistakable evidences on the surface. The wilder

[1] There must be some mistake here; the author probably means *plum*.—M.

[2] The Shara-hada and Suma-hada are probably spurs of the marginal range of the Mongolian plateau, and do not extend far to the north.

[3] The height above sea-level, of the foot of the Suma-hada, at its south-eastern extremity, is 5,600 feet.

parts are covered with the same kinds of bushes as those we had seen on the Shara-hada. We also found trees growing here, among which were the elm (*Ulmus* sp.), the alder (*Alnus* sp.), and the maple (*Acer Ginnalum*); the last-mentioned is, however, very rare. It is worthy of note that here, as in every other part of Mongolia without exception, the trees and bushes grow exclusively on the northern slopes of the mountains and valleys; even on all the insignificant hills of the Guchin-gurbu vegetation thrives better on the northern side.

It was in the Suma-hada mountains that we first saw the most remarkable animal of the highlands of Central Asia,—the mountain sheep or Argali (*Ovis Argali*[1]). This animal, which stands about as high as a hind, prefers the most rocky parts, but in spring, attracted by the fresh herbage, it descends to the valleys and may be seen grazing with antelopes.

The argali is peculiar in its habits; once having selected its ground, there it will remain; and a herd of them has been known to frequent one mountain for a succession of years, provided, of course, that they are undisturbed; as they are in the Suma-hada mountains, where the Mongol and Chinese inhabitants have very few guns, and are so little of sportsmen that they never kill one of these animals, —not from any feeling of compassion, but from sheer want of skill.

The argali have become so accustomed to the

[1] *Argali* is the Mongol name for this sheep; the Chinese call it *nan-yang*.

neighbourhood of man that they may be often seen browsing with the Mongol cattle, and drinking out of the same troughs with them. We could hardly believe our eyes when we saw, not half a mile from our tent, a herd of these handsome beasts quietly grazing on the side of a hill. They evidently have not yet learned to recognise our race as their enemy, and are ignorant of the terrible weapons of the European.

A violent storm, which lasted several days, prevented us from at once starting in pursuit, and obliged us to restrain our impatience for a while. The first day we went after them we killed nothing, owing to our ignorance of their habits, and our over-eagerness causing us to miss several shots at short distances. But on the following day we succeeded in bagging two fine full-grown males.

The argali is so keen-sighted, quick of hearing, and has such a delicate sense of smell, that were it less confiding, it would be very difficult to get within range of it in the Suma-hada mountains; but so tame is it that it will quietly gaze at the sportsman when only 500 paces off.

The best time for sport is the early morning and the evening. At dawn the argali seek the grassy hollows in the mountains, generally at a considerable elevation, or some spot sheltered from the wind. They are mostly seen in herds of ten to fifteen, rarely single. While feeding one of them mounts on the nearest rock to reconnoitre, but after remaining stationary for a short time it rejoins its companions

and begins grazing with them; in the Suma-hada mountains, however, they are so confident of security as not always to observe the precaution of posting sentinels, and they may be very easily stalked. After their morning meal they usually lie down among the rocks, where they remain till evening.

The report of a gun startles a herd, and they go off at full speed in an opposite direction, but after running a little way they stop to see where the danger lies, giving the sportsman ample time to reload. The Mongols told us that if they placed some conspicuous object, such as a piece of clothing, to attract their attention, they would remain motionless while the hunter stalked them without difficulty. I myself successfully tried the experiment by suspending a red shirt on the top of a ramrod, which I stuck into the ground, and in this way arrested the attention of a frightened herd for more than a quarter of an hour.

They are very tenacious of life, and I have known them run, with a bullet through the chest and protruding entrails, for several hundred yards, and then only drop down dead. If one of a herd fall lifeless, its companions remain beside it, regardless of the hunter's approach. I never heard them utter a sound. The Mongols told us that the coupling season began in August, but I do not know how long it continues. While it lasts the males fight furiously, making terrible use of their long horns, a pair of which weigh 36 lbs. and upwards. The period of gestation is about seven months, at the end of which

time the female bears one, or, as an exception, two young ones; they soon follow the mother about everywhere, skipping from rock to rock after her, and if she be killed, hide close by, not stirring from their place of concealment until compelled. When accompanied by their young the females are generally seen in pairs, or in small herds guarded by males, which at all other times except the breeding season live in peace and harmony with one another. They are preyed on by wolves, which pursue them, and occasionally catch an inexperienced youngster; but this rarely happens with the full-grown argali, because they are swift runners even on level ground, and once among the rocks they will distance their enemy in a few bounds.

I have seen the males jump from heights of twenty or thirty feet, always alighting on their feet, and even trying to lessen the shock by sliding down the rocks; but the stories told of argali throwing themselves down steep precipices, and alighting on their horns, are pure fiction.

Besides the Suma-hada range the argali is distributed over the mountains bordering the northern bend of the Hoang-ho and those of Ala-shan; in Kan-su and Tibet it is replaced by another closely allied species.

The month of May, the best of the spring months in other regions, is far from agreeable here. The incessant gales from the north-west and south-west continued with the same violence as in April; the morning frosts lasted till the end of the month,

and on the 5th and 6th June there were heavy hail-storms. But now and then the cold weather would give place to intense heat, reminding us that we were in 41° north latitude. Although the sky was often cloudy very little rain fell; a circumstance which, combined with the cold, checked vegetation. Even in the beginning of June the grass was barely above the ground, and hardly concealed the dirty yellowish mud and clay soil of the plain. The few bushes growing on the mountains were by this time mostly in flower, but they were so low and of such stunted growth, so choked with thorns and hidden by rocks, that they contributed very little towards enlivening the general aspect of the landscape. Neither were the fields cultivated by the Chinese as yet green, for in consequence of the late frosts the corn is not sown till the early part of June. In fact the face of Nature was lifeless and mournful; every thing was in a dull and dismal unison. Even singing birds were rare, and so incessant were the storms that such as there were had no chance to sing. Now and again, as you made your way through some valley, or over some hill, you might hear the voice of the stonechat or the carol of a lark, the croak of a raven, the whistle of the marmot, or a chattering jackdaw; all else was silent, sad, and inanimate.

Near the eastern border of the Suma-hada mountains the country of the Chakhars terminates, and the aimak (principality) of the Urutes begins, extending a long way to the west of Ala-shan, and bordering on the south with the Tumites of Kuku-khoto and

Ordos, and on the north with the Sunites and Khalkas. For administrative purposes this aimak is divided into six koshungs, viz. Durbute, Nimgan, Barun-kung, Dundu-kung, Tsun-kung, and Darhan-bil. The chief seat of government, and the head-quarters of the prince, is at Ulan-sabo in the ko-shung of the Durbutes.

The Urutes are very distinct from the Chakhars in external appearance, resembling more closely the thoroughbred Mongols; but they also are demoralised by Chinese influence. Their nearest neighbours, the Western Tumites of Kuku-khoto, like the Chakhars, have become assimilated with the Chinese, and are intermixed with them, living either in yurtas or more rarely in houses. Here and there they cultivate the soil in imitation of the latter, but agriculture is in general very backward. A striking trait in their character, as in that of all the nomads, is an extraordinary thirst after money; in this respect they are not even surpassed by the Chinese; they will do anything for a lump of silver, and travellers who have sufficient means at their command can profit by their venality. But in dealing with them you must have the patience of an angel; in the most ordinary transactions the difficulties are innumerable. For instance, you want to buy a sheep, a thing one would suppose to be simple enough, but in reality quite the reverse. If you go straight to a Mongol and ask him to sell you a sheep, offering to pay him his own price, nine times out of ten you will be unsuccessful. Finding a ready compliance on your part, he imme-

diately suspects that you are trying to cheat him, and will frequently flatly refuse. You must on these occasions conform to a certain etiquette. First, sit down by the side of the vendor, drink tea with him, enquire after the health of his cattle, and listen to some long-winded story about the dearness of things in general and sheep in particular. The next stage in the proceedings is the inspection, or, literally, the *feeling* of the animal to be sold, which commands a higher value, according to Mongol ideas, in proportion to its fat. Act 3 : buyer and seller return to the yurta, sit down again, drink tea, and begin negotiating about the price. Of course, your offer must be much less than he asks ; in the meanwhile expressions of mutual regard and friendship are freely interchanged ; the owner extols the good qualities of his animal, which the buyer naturally depreciates.

Finally, the price is never fixed by word of mouth but by a pressure of the fingers,—one of the parties allowing the sleeve of his coat to hang down, whereupon the other thrusts his hand into it, so that the whole transaction is secret. This mode of concluding a bargain is also common in certain parts of China in ordinary commercial transactions. At length, after endless hand-shaking and interchange of compliments, the sheep is bought. The silver and the scales must then be scrutinised ; the vendor usually finding fault with the latter, and offering the use of his own, which are anything but irreproachable. A discussion ensues, which is settled somehow

or other, and the silver is weighed out. But even now the master of the sheep tries to make something more out of it, and asks for the entrails, which are usually peremptorily refused.

The whole process as we have described it occupies about two hours, and we always had to go through it whenever we had occasion to purchase a sheep during our three years' wanderings. The average price of one of these animals in South-eastern Mongolia is from two to three lans (11*s.* to 16*s.* 6*d.*); but their quality is excellent, especially in the Khalka country, where a full-grown fat sheep yields from fifty-five to seventy pounds of meat or even more, the rump fat (*kurdiuk*) alone weighing from eight to twelve pounds. The difficulties in buying milk are also very considerable, and nothing will induce them to sell it in cloudy weather. We were sometimes successful in overcoming the scruples of one of the fair sex by a present of needles or red beads, but in such case she always begged us to cover the vessel over when removing it from the yurta, in order that the heavens should not witness the wicked deed. I may add that Mongols keep milk in the dirtiest way imaginable. It frequently happened that one of them would ride up to our tent with a jugful for sale, the lid and spout of the vessel having been smeared with fresh cowdung to prevent the liquid splashing out on the road. Cows' teats are never washed before milking, nor are the vessels into which the milk is poured. The price is high; and we usually paid 1½*d.* or 3*d.* a bottle for it; butter averaged 1*s.* 6*d.* a pound.

Our troubles with the Mongols were not limited to the purchase of their sheep, which happened rarely, in the first place, because we had to economise our slender resources, and in the second, that they would be refused when we stood in need; but this last usually happened with the Chinese, who wished to starve out of their country such unwelcome guests. We lived too on what we could shoot, and hares and partridges were so plentiful that we killed more than enough for our wants. Unfortunately meat would not keep at all in hot weather, and we sometimes fasted when game was not very abundant.

While we adhered to our resolution to keep aloof as much as possible from the inhabitants, we were generally obliged to pitch our tent near them in order to procure water, always preferring the neighbourhood of the Mongols. These people would come to our tent and ask who we were, whither we were going, and what we were selling. In my assumed character of merchant I was obliged to receive them whether I liked it or not, and to show them our wares, which they would examine and then begin bargaining. There was no end to their absurd questions. For instance, one would ask if we had a magnet for sale, another wanted bears' gall, a third children's toys, a fourth brass idols, and so on. Very often, after about an hour's chat our visitors would take their departure without having bought anything, declaring that it was all too dear. The Buriat Cossack, who was clever at this sort of thing, had charge of the trading; but the trade did not advance very

briskly,[1] although it took up a good deal of our interpreter's time; besides which those experienced in commercial affairs at once perceived that a retail trade was not the real object of our journey, as under the most favourable circumstances it would not defray the cost of our pack-animals; and lastly, we could not rid ourselves of the constant visitors who, under the pretence of coming to buy, invaded our privacy and interfered with our scientific labours. Taking all this into consideration, I resolved one fine day to put an end to my profession of merchant. The goods were all packed up, the buyers driven away, and the shop closed.[2] I announced that I was an official (*noyon*), travelling without any special object except that of seeing new countries. The natives certainly put very little faith in this explanation, but we told them that it was no business of theirs, that their Emperor knew all about it, and had given us a passport to enable us to travel without let or hindrance in his country. We now felt much more at our ease, there was no longer any necessity for prevarication, and everything was straightforward. Henceforward all superfluous visitors were summarily ejected, and only those admitted who might be of use. Their visits always began with tea-drinking, and conversation followed; the principal topics, taking them in their proper order, were cattle, medicine, and religion.

[1] These goods were subsequently all sold in one lot in Ala-shan.

[2] We only charged a profit of 25 or 30 per cent. on the prices we paid at Peking.

The first of these, cattle, is the most important of the three, because it is so intimately connected with their well-being; and on this account, when meeting one another the first enquiries are always after the health of the flocks and herds, that of the master and his family coming next.

Medicine is another everyday subject of conversation with them, and they delight in hearing of cures performed. At the sight of a European, who is regarded in the light of a demigod, or at least as a great magician, the Mongol at once endeavours to derive some benefit from so extraordinary a person, and to learn from him some secret cure for his ailments. My collection of plants and herbs persuaded the inhabitants still further that I was a doctor, and I afterwards actually established a reputation as such from some cures I made in bad cases of fever, by administering doses of quinine.

The religious persuasions which underlie the whole current of the nomad's life, but are quite incomprehensible in themselves, rank next in the order of his intellectual ideas. He will never lose an opportunity of talking about the ceremonies of his religion, the miracles performed by the gigens, &c. &c.; his fanaticism is apparent in all these discussions, and he never for a moment wavers in his faith.

My transformation from a merchant to an official was of great advantage to us, for we were now independent of the natives, whereas in our assumed character of traders this was impossible. With such

people as the Chinese or Mongols who only respect force, kindness and politeness are wasted or mistaken for weakness and cowardice. On the other hand, boldness sometimes produces a magic effect, and the traveller armed with this weapon will in the end be more successful. It must be understood that I am, no advocate for bullying, but what I wish to say is that when a traveller makes his way into remote parts of Asia, he must discard many of his former opinions for others more adapted to the sphere in which he finds himself.

We now took the direction of the Yellow River, and, having no guide, trusted to our enquiries to direct us. We met with great difficulties from our ignorance of the language, and from the suspicion and hostility of the inhabitants, of the Chinese in particular, who would often refuse to show us the road or purposely mislead us. We lost our way nearly every march, and sometimes went a dozen of miles or more before discovering our mistake.

Occasionally we passed through a populous Chinese settlement, where our difficulties were always aggravated. A large crowd would assemble; all the inhabitants, young and old, ran out into the streets, or climbed up on the palisades or roofs of their houses, to stare at us with unmeaning curiosity; the dogs howled in concert and snapped at poor 'Faust;' startled horses neighed, cows lowed, pigs squeaked, fowls flew hither and thither; in short, all was noise and confusion. We would generally let the caravan advance, while one of us remained behind to ask the

way. The Chinese would then approach, but instead of answering our questions, they would handle and examine our saddles and boots, look with awe at our guns, enquire whither we were bound, whence and wherefore had we come, &c. As for the directions about our road, they were entirely omitted, and only as an exceptional piece of good luck would a Chinaman point in the direction we had to go. From the number of cross roads leading from village to village such directions as these were an insufficient guide, and we therefore went at hap-hazard till we came to another village, when the same experiences were repeated.

Once the Chinese took it into their heads to let loose one of their chained dogs at us, with the intention of killing 'Faust.' Fortunately he happened to be close to me at the time, and no sooner had the mastiff attacked him than I drew one of my revolvers from the holster and shot it dead on the spot. Upon this the Chinese at once dispersed to their homes, and we continued our journey without any further molestation. One must act promptly in these countries, for if you let them kill your dog one day, they may try and kill you the next, and then it becomes a much more serious affair; but if you make them feel that you will not put up with insults, they will treat you much better, although, of course, the hatred to foreigners always remains, and Europeans must endure it.

At Tsagan-chulutai,[1] one of the Chinese settle-

[1] Properly Tsagan-chulu, i.e. 'White Stones,' in Mongolian.

ments, we wanted to change some lans (taëls) of silver into copper coin, in order to make a few purchases, and knowing by experience the obstacles we should encounter, increased by ignorance of the Chinese language, I engaged a Mongol to help me. We were certainly beset by difficulties. On entering Tsagan-chulutai we were met by the usual uproar and tumult; I waited till the caravan had passed out of the place, and then directed my steps to a shop where they pronounced my silver (of the finest quality) to be bad; at another, we were told that it contained bits of iron; at a third, they flatly refused to change it, and it was not till we tried a fourth that we were successful. Here the shopman examined the metal for some time, sounded it, smelt it, and at last, as a favour, offered 1,400 cash for a taël of it, which was exactly 400 less than its local value. Bargaining then commenced; my Mongol argued with the shopman with great spirit, pressed his fingers inside the other's sleeve, and finally concluded the transaction for 1,500 cash, which we received as an equivalent for a taël of our silver at the *manchan* rate of exchange, i. e. counting each copper coin as worth its intrinsic value, the *dzelen* or local reckoning being at the rate of sixty for a hundred—this being the fourth difference in the value of money we had experienced since our departure from Dolon-nor.

The splendid pasturage we had noticed throughout the country of the Chakhars terminated at the Suma-hada mountains, and the further we went the more scanty the fodder, and the thinner grew our

horses and camels. The latter suffered too from the want of salt, as we had not passed any saline marshes since we left the Kiakhta road, and we were therefore well pleased at the sight of the small salt lake of Tabasun-nor, where our animals could indulge in their favourite brine.

The elevation of the country west of the Sumahada mountains continues to be very considerable, but the supply of water is very deficient, especially near those mountains which rise from the bank of the Yellow River, and are known to geographers under the name of *In-shan*.[1]

This range begins on the plateau of Mongolia near the town of Kuku-khoto,[2] and forms a lofty precipitous barrier along the northern bend of the Hoang-ho, terminating in the valley of the river 170 miles from its commencement with the rocky belt of Munni-ula. The wild alpine character of these mountains is preserved throughout their extent, and they are distinguished from the other mountains of South-eastern Mongolia by an abundance of wood and water. Two ranges constitute a further extension of the system to the westward, still parallel to the northern elbow of the river: the Sheiten-ula nearest to the In-shan, and beyond this, the Kara-narin-ula, from the river Haliutai to the confines of Northern Ala-shan. Both these groups

[1] The natives do not know this name, and have their own names for different parts of the range.

[2] In a wider sense, the term In-shan applies to all the mountains from the northern bend of the Hoang-ho through the Chakhar country to the sources of the Shara-muren and the confines of Manchuria.

of mountains are physically distinct from the In-shan proper, of which they are not, strictly speaking, a continuation, other and much smaller mountains supplying the connecting links of the chain; this interruption is particularly marked between the Sheiten-ula and Kara-narin-ula.[1] Moreover, the former is a much lower range than the In-shan, besides being less thickly wooded and not so plentifully watered. Again, the mountains which lie beyond the Haliutai river, although of considerable elevation and completely alpine in character, are also unwooded and form a marginal range, having on one side the valley of the Hoang-ho, on the other a lofty table-land.

We entered the In-shan by that part called by the Mongols *Sirun-bulik*, and I cannot describe the pleasure we felt, after marching for so long a time over bleak, cheerless plains, to see wooded mountains, and to rest under the shade of green trees. We started that day for the chase, and climbing to the summit of a high peak we caught our first glimpse of the Yellow River winding through the great plains of Ordos.

[1] In my letter (see Proc. Imp. Russ. Geog. Soc., viii. 5. 174), I said that the range on the left bank of the Hoang-ho from the Haliutai river to the borders of Ala-shan, 'was neither connected with the In-shan nor with the Ala-shan mountain systems.' On a closer investigation of these localities in the spring of 1872, I found that there actually is a connection between the Kara-narin-ula and the Sheiten-ula by means of a row of hillocks. The Sheiten-ula are in their turn united with the In-shan proper by the *Shohoin-daban* (i.e. limestone range). But there cannot be the slightest doubt of the independence of all these groups of mountains from the Ala-shan system.

The next day our intention of penetrating still deeper into these mountains was thwarted by an accident which detained us unexpectedly in the same place. At ten in the morning a thunderstorm accompanied by heavy rain burst over our heads, and having carelessly pitched our tent in the dry bed of a mountain torrent fed by two ravines, in a few minutes streams of water were pouring straight down upon our humble dwelling. We were inundated by the torrent, and in a few moments some of our lighter articles might be seen floating down stream. By good luck half the tent stood on higher ground, to which the water did not immediately rise. Hither we carried some of our soaking things, damming the water out of the tent with felt to protect our baggage. Fortunately our disagreeable situation only lasted half an hour; as soon as the storm had passed and the rain ceased, the torrent speedily subsided and dried up, and the only traces left of the catastrophe were our damp things hung up to dry. The day after this occurrence we marched a short distance (ten miles) to the temple of Bathar Sheilun, called Udan-chau by the Chinese, picturesquely situated in the midst of wild, rocky scenery, and regarded as one of the most important in South-eastern Mongolia. The gorgeous shrine is four stories high, and surrounded by a cluster of houses inhabited by 2,000 lamas, whose numbers are increased in summer by the numerous pilgrims who visit the temple to 7,000, many coming from great distances. We ourselves saw, near Lake

Dalai-nor, a Mongol prince on his way to pray here. He had a large quantity of goods and chattels, and was followed by a train of several hundred sheep, to supply him with provisions on the road; they told us that he only ate the fat *kurdiuk*, leaving the remainder of the sheep to his suite.

The entire staff of lamas at Bathar Sheilun is supported by the voluntary contributions of devotees; an extensive tract of land is also reserved for the pasturage of the herds of cattle[1] which supply the monks with milk and butter. The lamas manufacture clay idols which are sold to the pilgrims, and there is a school for training boys for the religious profession.

The lofty cliffs which surround this temple are the favourite haunts of the mountain antelope (*Antilope caudata* ?); but it is forbidden to hunt them, it being considered wrong to destroy life within so short a distance of the sacred edifice.[2] However, the temptation of procuring a skin of one of these animals was too great to be resisted, and on the evening of the second day after our arrival, I went into the mountains, where I passed the night in the open air, and shot a young buck early the following morning. As we found this little animal nowhere else except in the In-shan, I will say a few words on its habits and mode of life.

Like other kinds of mountain antelopes, this

[1] All the large temples of Mongolia own such lands.

[2] We met with similar prohibitions to hunt near the temples in other parts of Mongolia.

species selects the wildest and most inaccessible crags of the alpine zones for its habitation. Here they may be found single or in pairs; during the whole of the day they hide in the most secluded spots, from which they will not stir till the hunter is close to them.

Towards evening they emerge from their retreats and feed during the whole of the night and for an hour or two after sunrise, when they again repair to their coverts. Their favourite and almost exclusive grazing-places are the alpine meadows, especially the small grassy plots among the rocks. Before entering them and during the feeding time they will often climb to the summit of a hill or ledge of rock, and remain there for a long while to assure themselves of safety.

They return to the same place over and over again, as we could tell by the large heaps of their droppings collected in these spots. When stationary, as well as when on the move, they swing their long black tails from side to side, and while grazing utter a low, short cry. The mountain antelope is a most timid animal; when alarmed it seeks safety in rapid flight, and will leap down deep ravines when hard pressed. I once saw one, on suddenly perceiving me, jump from a rock 100 feet high, and go away apparently unharmed. It was curious to see the swifts, which build their nests in the sides of the cliffs, pursue the animal in its descent. The sound of its hoofs as it alighted was like a dull heavy blow on the rocks. Its legs are thick in comparison with

the small size of the body: the inhabitants make warm clothing of its winter coat, each skin fetching about 2*s.* 6*d.*

The third day after we had pitched our camp in the vicinity of Bathar Sheilun, a small detachment of Chinese soldiers, commanded by an officer, suddenly presented themselves before us, and demanded our passports. It appeared that the lamas of the temple, apprehending that we were Dungan spies, had given notice of our arrival at the neighbouring Chinese town of Bautu, whence the soldiers had been sent. They approached us in order of battle, with lighted fuses and drawn swords. But this farce was soon played out. We invited the officer to our tent, and showed him our Peking passport, which at once produced an impression. While a copy was being taken of this document, I entertained the officer with tea and Russian sugar, and presented him with a penknife, and we parted the best of good friends. We only discovered after their departure that the soldiers had carried away with them some of our smaller articles. From Bathar Sheilun we marched towards the mountains of Munni-ula which, as we have stated, form the westernmost termination of the proper In-shan. As the latter range is in all probability of one character throughout, a more detailed description of its western ridge may suffice for the whole.

Extending for nearly seventy miles between two valleys, one on the north and the other on the south (towards the Hoang-ho), the Munni-ula rises as a

bold belt of mountains about seventeen miles wide. The highest peaks are upwards of 8,000,[1] perhaps as much as 9,000 feet, above sea-level, but nowhere attain the limit of perpetual snow. The main axis runs almost through the centre of the width, the descents on either side being steep, and indented with rugged gorges and narrow valleys. The whole range is rocky and of a bold alpine character, especially on its southern side. The rocks[2] are for the most part syenitic granite, common gneiss, hornblende, granolite, porphyry, and the later volcanic formations. The borders are devoid of trees, and only dotted with occasional clumps of wild peach, hazel, and yellow honeysuckle, the same as those we found in the Shara-hada and Suma-hada ranges. As we ascended, however, the bushes grew thicker, and single trees began to appear, as for instance the Scotch pine (*Pinus sylvestris*), and a low kind of elm (*Ulmus* sp.). About six miles from the outer edge of the range on the northern side (but not more than a mile-and-a-half on the southern side), at an elevation of nearly 5,300 feet, the forests begin,[3] increasing in size and density as you ascend. Here too the trees grow mostly in valleys having a

[1] The highest peak of the Munni-ula is considered to be Mount Shara-oroi, near the western extremity of the range; we could not measure its height, not having been in that part of the mountains. The peaks I measured in the centre of the Munni-ula were 7,400 feet above sea-level. Mount Shara-oroi is certainly 1,000 feet higher than any of them. It should be mentioned that there are two peaks of that name,—one not far from our route, but that also I could not measure.

[2] Of the Munni-ula as well as of the Sirun-bulik.

[3] Probably lower on the southern slopes.

northerly aspect, and the slopes facing the south are more often bare than wooded, and the same remark applies to the southern parts of the range where arboreal vegetation is most abundant.

The chief kinds of trees are the aspen (*Populus tremula* ?), black birch (*Betula daurica*),[1] and willow (*Salix* sp.), the last-named growing in bushes and trees twenty feet high; the aspen attains a somewhat greater height, while the black birch is in general of lesser size. Among other trees we noticed in these forests the white birch (*Betula alba*), poplar (*Populus laurifolia*), alder (*Alnus* sp.), mountain ash (*Sorbus Aucuparia*), and apricot[2] (*Prunus* sp.); an occasional dwarf oak (*Quercus Mongolica*) may be seen with a trunk seven feet high, limes (*Tilia* sp.) of the same dimensions, juniper (*Juniperus communis*), and thujas (*Biota orientalis*), the last-named growing only in the lowest tree-belt on the southern slopes of the mountains. The absence of the spruce fir is a notable circumstance. The commonest of the bushes is the hazel (*Ostryopsis Davidiana*), attaining a height of three or four feet and frequently covering the exposed mountain sides with dense brushwood. We also noticed the wild rose (*Rosa acicularis*), wild raspberry (*Rubus Idæus*), wild currant (*Ribes pulchellum*), guelder rose (*Viburnum Opulus*), dogwood (*Cornus* sp.), buckthorn (*Rhamnus arguta*), *Spiræa* and *Lespedeza bicolor*, so common in the woods of the Southern Amur.

[1] According to Loudon, *Betula lenta* is the black birch.—M.

[2] The apricot mostly grows on the bare mountain sides.

The dry beds of the mountain torrents nearer the borders of the range were fringed with the yellow honeysuckle, wild peach, hawthorn (*Cratægus sanguinea*), and barberry (*Berberis* sp.). A climbing clematis might now and again be seen crowning the top of a bush with a garland of yellow flowers, and the open meadows were thickly covered with motherwort (*Iconurus Sibiricus*), and two varieties of wild onion (*Allium odorum*, *A. anisopodium*). The variety of herbaceous plants exceeds that of either trees or bushes. Here, as in Europe, the woods are adorned with the lily of the valley (*Convallaria majalis*), the Smilacina (*Maianthemum bifolium*), and anemone (*Anemone sylvestris*, *A. barbulata*); the familiar stone-bramble (*Rubus saxatilis*) and wild strawberry (*Fragaria* sp.) are also not uncommon; close beside them blossomed the spear-leaved Cacalia (*Cacalia hastata*), echinospermum (*Echinospermum* sp.), several kinds of peas (*Vicia*), *Polygonatum officinale*, *Phlomis umbrosa*, *Agrimonia* sp.; the spleenwort (*Asplenium* sp.), thickly covered patches of the forest ground.

In the woodland glades grow peonies (*Pæonia albiflora*), the yellow *Hemerocallis* and red lily *Lilium tenuifolium*, geraniums (*Geranium* sp.), the rose-bay willow herb (*Epilobium angustifolium*), &c. Valerians (*Valeriana officinalis*), and wild tansey or silver weed (*Potentilla anserina*).

In the swampy places and round the mountain springs, the herbaceous plants are still more varied. Here may be seen in profusion the Ligularia, the

lousewort (*Pedicularis resupinata*), the columbine (*Aquilegia viridiflora*), the nonsuch (*Medicago lupulina*), the speedwells (*Veronica Sibirica* and another), the elecampane (*Inula Britannica*), three or four varieties of Ranunculi, the avens (*Geum strictum*), the iris (*Adenophora* sp.), the milfoil (*Achillea Mongolica*), and in dry places the nightshade (*Solanum* sp.) and nettle (*Urtica angustifolia*).

Lastly, blossoming on the unwooded hillsides were the carnation (*Dianthus Seguieri*), the rocket (*Hesperis trichocephala*), the poppy (*Papaver Alpinum*), the yellow stonecrop (*Sedum aizoon*), the wolf's bane, or globe thistle (*Echinops Dauricus*), the onion (*Allium* sp.), *Kœleria cristata*, *Statice* sp. *Paradanthus*, and others.

In general the flora of the Munni-ula reminded me a good deal of that of Siberia, although these forests are very different to ours in the north. Here there is none of that luxuriant vegetation which excites the admiration of the traveller on the banks of the Amur and Ussuri. The trees are not high, and their trunks are slender, the bushes are low and stunted, and the withered branches of the willows protruding from the living trees are unsightly objects amid the prevailing verdure. The mountain brooks, which are almost all full of running water in the wooded ravines, no sooner enter the more open valleys, or issue from the margin of the range, than they entirely disappear beneath the soil, leaving dry beds in which the water only collects after heavy rain; the forests too have been ruthlessly destroyed

by the neighbouring Chinese, in spite of the forest guard; the larger trees have all been felled and only stumps remain to show that good-sized timber once grew here.

Above the tree-belt the highest parts of the mountains are occupied by the zone of alpine meadows. It is a refreshing sight, after the monotonous vegetation of the lower belts, consisting chiefly of a few crooked bushes, and after the damp undergrowth of deciduous trees, to feast one's eyes on the bright green variegated flowers which cover the rich meadow-land of the mountains; the slopes and hollows are clad with short thick grass, leaving bare only the crags and solitary rocks, the yellowish-grey tints of which contrast with the enchanting verdure and delightful variety of flowers. Shrubs of spiræa and cinquefoil (*Potentilla fruticosa*), the globe-flower (*Trollius* sp.), the great-burnet (*Sanguisorba alpina*), the corn-flower (*Polemonium cæruleum*), ranunculi, and many others mentioned in our description of the flora of the woods, flood these meadows with their yellow, white, red, and blue hues, now intermingled in pleasing variety, now grouped in masses of colour.

But the sight is still more brilliant in the early morning when the first rays of the sun sparkle on the dew drops hanging on every petal, the surrounding stillness only broken by the notes of the stone-chat or the pipit, and a splendid view disclosed of the Hoang-ho and the plains of Ordos stretching away far beyond it.

The wild animals of the Munni-ula are less plentiful than one would have expected. Of the larger mammalia the only representatives are the stag (*Cervus elaphus*), the pygarg (*Cervus pygargus*), the mountain antelope (*Antilope caudata*), the wolf (*Canis lupus*), and the fox (*Canis vulpes*), but not one of the feline race, although, as we heard from the inhabitants, there used to be panthers and even tigers.[1] Of the class of Rodents there are probably mice and weasels in the forest, hares (*Lepus Tolai*), common throughout Mongolia and marmots (*Spermophilus* sp.) in the valleys on the outskirts of the mountains. The last-mentioned animal is about the size of a rat, and at the sight of man, or merely from fright, it sits up on its hind legs near its burrow and whistles.

Birds are more plentiful, yet the ornithology of the Munni-ula is poor in comparison with the extent of its woods. The sudden changes of temperature, from calms to storms, from excessive dryness to great moisture, probably prevent many of the Chinese birds from penetrating to even the best parts of the plateau of Mongolia. In the wildest and most inaccessible cliffs of the alpine zone the vulture (*Vultur monachus*) and lammergeier (*Gypäetos barbatus*) build their nests, two enormous birds with a nine-feet stroke of wing. Side by side with them live the swifts (*Cypselus leucopyga*), the noisy red-legged crow (*Fregilus graculus*), and the rock dove (*Co-*

[1] The Mongols assured us that there were panthers in the In-shan even now, but nearer Kuku-khoto, and not in the Munni-ula.

lumba rupestris); the mountain pipit (*Anthus rosaceus*) inhabits the alpine meadows. In the tree belt several of the small warblers make their appearance; the redstart (*Ruticilla aurorea*), the bunting (*Emberiza* sp.), the nut-hatch (*Sitta sinensis*), the wren (*Troglodytes* sp.) the greater titmouse (*Pœcile cincta*[1]), *Phyllopneuste superciliosus*, *Phyllopneuste* sp., *Pterorhinus Davidii*, *Drymœca extensicauda*; woodpeckers (*Picus* sp., *Picus martius* rare) tap the trees, pheasants (*Phasianus torquatus*) call morning and evening, and at sunset the monotonous hooting of the Japanese owl (*Caprimulgus Jotaca*), called in Siberia 'the blacksmith,' resounds on all sides. Below the tree-belt in the dry ravines and among the rocks are found the stone-thrush (*Petrocincla saxatilis*), the stonechat (*Saxicola Isabellina*), the hoopoe (*Upupa epops*), the grey and rock partridge (*Perdix barbata*, *P. chukor*), the latter also inhabiting the alpine zone, and attracting attention by its noisy and almost incessant clucking.

The striking contrast between the Munni-ula and the other ranges of South-eastern Mongolia has given rise to a Mongol tradition concerning their origin, according to which in times long past, a thousand years ago or more, there lived a Kutukhtu at Peking, who in spite of his divine origin led such an ungodly life that he was arrested and put into prison by order of the Emperor. Indignant at such harsh treatment, the holy man caused an enormous bird to

[1] This is the Siberian tit.: the Latin name for the greater titmouse is *Parus major*.—M.

appear, ordering it to overturn the capital of his sovereign. Whereupon the Emperor in his fright set the Kutukhtu at liberty, and the latter countermanded his order to the bird, which had only time to raise one end of the city, accounting for the slightly inclined plane on which Peking is situated at the present day.

The miracle-working saint then resolved to quit the inhospitable city and settle in Tibet. Setting out on his journey, he arrived safely on the banks of the Hoang-ho; but the Chinese here refused to ferry him across to the other side: his wrath was now rekindled, and he determined to revenge himself in good earnest this time. He forthwith started for Northern Mongolia and selected a large chain of mountains from the Altai range, which he fastened to his stirrups and dragged behind him on horseback to the bank of the Hoang-ho, intending to throw them into the river and by damming its current to inundate the surrounding country. Buddha now appeared in person to protect the unfortunate inhabitants, and entreated the Kutukhtu to abate his anger and show mercy to the innocent. The saint obeyed the voice of the god, and left the mountains on the bank of the river as a monument of his might; he then unfastened his belt and flung it across the Hoang-ho to serve as a bridge, over which he passed to the opposite bank and continued his journey to Tibet.

In depositing the Munni-ula on the banks of the Hoang-ho the Kutukhtu reversed its position; con-

sequently the side previously facing north was now turned towards the south, and *vice versâ*. The Mongols declare that on this account more trees grow on the southern than on the northern slopes, unlike the other ranges in Mongolia, where it is just the contrary. These peculiarities they attribute to their strange northern origin.

According to another tradition Chinghiz-Khan once lived in the Munni-ula while waging war with China. He took up his abode on Mount Shara-oroi,[1] where the iron saucepan in which he cooked his food still exists, though hitherto no one has been able to discover it. During the summer religious services are performed here by the lamas of the neighbouring temple of Mirgin. The very name Munni-ula is said to have been given by Chinghiz-Khan, who liked the place on account of the quantity of game he found here.

The Mongols assert that on Mount Shara-oroi there is a fossil elephant, and that a quantity of ingot silver has been buried in some other part of the range, but that evil spirits guard the treasure and will not allow it to be removed. They say that the silver lies near the summit of a mountain in a great pit, the mouth of which is covered by an iron shutter, through an orifice in which the treasure may be espied, and that some daring fellows once tried to get hold of it by lowering into the pit in winter some pieces of raw meat and freezing the ingots to it; in

[1] The mountain of that name situated in the centre of the range, not that one at its western extremity.

this way they contrived to raise some nearly to the top, but before they could grasp the precious metal in their hands it fell back again, and no human power could extract it from the enchanted spot.

We spent three days in endeavouring to find a pass over the Munni-ula mountains (for neither Chinese nor Mongols would show us the road), first trying one valley, then another, without success; the valleys always narrowed into gorges, and perpendicular cliffs soon barred our further progress. At length on the third day we found a stream, the *Aramirgin-gol*, which we ascended almost to its source in the chief axis of the range, and here we pitched our tent in a small clearing in the forest.

Our appearance and stay in these mountains created a panic among the Chinese and Mongol inhabitants, who now saw Europeans for the first time,[1] and could not imagine what kind of people we were. The reports and conjectures on our arrival were endless. The lamas actually consulted the auguries, and prohibited the Mongols from selling us provisions; this order emanated from the superior of the temple of Himping, and caused us some inconvenience, for our supplies were nearly exhausted at that time. We hoped to have been able to provide ourselves with food by the chase, but in our ignorance of the localities we did not bag any game for some days, and consequently were obliged to

[1] Four years before our visit to these mountains the French missionary and naturalist *Armand David* was here on his way from Peking to Ordos.

live exclusively on millet porridge. At length I shot a pygarg, and when the Mongols saw they could not starve us out, they began selling us butter and milk.

We obtained very few specimens of birds; indeed since we left Kalgan, this branch of our researches had not made great progress, for besides the scarcity of the feathered tribe, it was their moulting time, and most of those we shot were unfit for preserving. With the insects, however, we were more fortunate, and still more so with the plants, many herbaceous varieties being in flower. The rains, usually accompanied by thunder, were incessant during the month of June, and the dryness of the previous month was succeeded by great moisture. But the violent storms which prevailed in May were now replaced by calm, sultry weather. Under such favourable conditions as these vegetation rapidly developed; early in June the plains and mountain sides were becoming green, and flowers appeared in great profusion and variety, although the steppes of South-east Mongolia[1] bear no comparison with our meadow-land in Europe. Here you never see that uninterrupted carpet of flowers, or that delicate green turf; these plains under the most favourable conditions have a melancholy aspect, and everything is as monotonous as though made to measure. The grass grows in clumps of even height, and not of a bright green, the flowers lack

[1] I refer to those plains due west of the Suma-hada, where we passed the summer: in the Chakhar country the meadow-land probably presents a more cheerful aspect at this season.

brilliancy of colouring, and it is only close to a spring that you see vegetation at its best.

During our fortnight's sojourn in the Munni-ula we went on several shooting excursions, often passing our nights in the mountains to take advantage of the early morning for sport. We were unsuccessful, however, in killing a stag, although they abound here, but just at this season they are eagerly sought after by the native hunters for the sake of their young antlers, which are highly esteemed in China. The most valuable are those with a third branch, containing the largest quantity of blood; they are worth from fifty to seventy lans each (14*l.* to 18*l.*); old horns of course are valueless.

The demand for deers' antlers is so great that thousands are annually imported from Siberia *viâ* Kiakhta, to which place they are sent by post from the most remote parts; a great many are also bought by the Chinese on the Amur, and sent to Peking through Manchuria.

During my residence on the Amur as well as on the present expedition I often enquired what use these young horns were put to, but never received any satisfactory answer. The Chinese keep it a profound secret; if report is to be believed, they undergo some preparation, and are used as a strong stimulant by the Celestials. I will not vouch for the veracity of this statement, but in any case young antlers take an important place in the Chinese pharmacopœia, or they would not be so extensively used or fetch such high prices.

We now for the first time in our lives experienced the difficulties of hunting in the mountains. I can confidently affirm that a man should have an iron constitution and a robust frame for such work. The dangers are often imminent, the hardships such as are unknown to the native of a plain country. You must climb over almost precipitous crags, stopping every ten minutes to recover your breath, and cling to narrow and sometimes treacherous ledges, now feeling your way along the brink of a deep gorge, now clambering over the loose *detritus* appropriately termed in Siberia, 'the devil's stones.' A false footstep, a stone giving way under you, and you may be precipitated down some deep abyss, and your career as a sportsman brought to a sudden and untimely end.

Sport in these mountains hardly repays the trouble, and depends a good deal more on luck than skill. How often your quarry, bird or beast, escapes you, giving time only for a snap shot as it vanishes in the thick wood, scales the rocks, or, if a bird, disappears behind the projecting crags of yonder cliff.

The animals, too, are very wary and difficult to stalk; they generally see or scent you before you have caught sight of them. One occasionally gets up under your feet, but the forest is so dense that before you see it, it has disappeared like a flash behind a rock, and you hear nothing but the sound of its hoofs and the noise of rolling stones disturbed in its flight. Even when a fair shot presents itself, your hand is so unsteady from hard climbing that

you are liable to miss, or the game, mortally wounded, falls down some inaccessible chasm and is lost. But one fortunate shot rewards you for all the troubles and difficulties you have undergone.

Then, too, what happy moments the mountains bring with them, as after climbing a lofty peak you obtain a distant view, as you linger for an hour in the exhilarating air, and admire the panorama spread out at your feet! The great cliffs, which close the gloomy defiles or tower towards the sky, have a wild beauty all their own; many a time have I paused on such a spot, and sat down on a rock to enjoy the impressive stillness of the scene, unbroken by the voice of man or the ordinary bustle of life. Now and then you may hear the cooing of the rock doves, the shrill cry of the kite, or the noisy descent of the vulture from the clouds to its nest, and then all is again still.

Towards the end of our stay in the Munniula we hired the services of a Mongol, by name Djuldjig, and accompanied by him set out for the Chinese town of Bautu,[1] to replenish our supplies of rice and millet, and then to cross the Hoang-ho and continue our journey to Ordos.

In order to reach the other side of the Munniula we followed the pass near our encampment, over which the natives ride on mules and asses. The road is not difficult, and the gradients only become steeper on the southern side, descending by the

[1] Properly *Si-Bautu*, in contradistinction to *Ara-Bautu*, a small village not far from it.

valley of the *Ubir-mirgin-gol*,[1] a rivulet which flows for ten miles through the mountains before issuing into the valley of the Hoang-ho.

Here the scenery suddenly changes. The mountains descend precipitously into the valley; forests, streams, and flowery meadows suddenly terminate, and in their stead appears a sandy waterless plain as level as a floor. The birds and animals of the mountains disappear; the call of the deer, the cluck of the partridge, the woodpecker's noisy hammer, and the music of singing birds are no longer heard; the antelope and larks reappear, and myriads of grasshoppers fill the sultry noonday air with their incessant chirruping.

After leaving the mountains, we took an easterly direction along the valley between the river and the In-shan range. The Chinese population is very dense, and their villages are nestled at the foot of the mountains, probably to escape the heavy floods of the Hoang-ho. The fields are large, well cultivated, and sown with millet, wheat, barley, buckwheat, oats, rice, maize, potatoes, hemp, peas and beans, and in some places with pumpkins, watermelons, common melons, and poppy. Owing to the lower level of the land and the shelter afforded by the mountains on the north, vegetation was very forward; some of the corn was ripening, and the barley was ready to carry.

Our next day's march of twenty-seven miles

[1] This stream, as well as the Ara-mirgin-gol, on issuing out of the mountains disappears under ground.

brought us in the afternoon to Bautu, five miles from the bank of the river, and about thirty-four miles to the west of the town of Chagan-Kuren,[1] described by Huc. Bautu is a large town surrounded by a square wall measuring two miles each way. It has a large population, and maintains an important trade with the nearest parts of Mongolia, i.e. with the country of the Urutes, Ordos, and Ala-shan. It contains an iron foundry for the manufacture of the large saucepans in such universal use, but its streets, as in all Chinese towns, are disgustingly dirty.

Hardly had we entered one of the gates, at which there was a guard-house, when our passport was demanded. On delivering it, one of the soldiers led us to the *yamen*, or public court, where we were detained for the space of twenty minutes, a large crowd assembling to stare at the 'strange 'foreign devils.' At length some officers of police came out of the yamen and told us that the Commander-in-chief desired to see us. We turned down another street and soon stopped at the gate of the residence of the Chinese general, where they invited us to dismount and enter the court-yard on foot. Our guns were taken from us, and we were then led into the presence of the great Mandarin, who awaited us at the door of his house attired in a crimson robe. Our Mongol attendant at the sight of such an important functionary fell down on his knees; we bowed in the European fashion. The Mandarin

[1] Huc, i. 214.

invited us in, and motioning to my companion and myself to be seated (the Mongol and Cossack remained standing), ordered tea to be handed, and began questioning us on the object of our journey, whence we had come, and whither we were going. On my telling him of my wish to travel through Ordos into Ala-shan, he assured me that it was very dangerous, for the country was infested with robbers. Knowing that nothing can be done in China without a bribe, I turned the subject from our future journey, and told the Cossack to interpret to the Mandarin that I wished to give him a good Russian watch as a keepsake. This at once produced an impression. He pretended at first to decline the proffered gift, but afterwards thanked me, and offered to give us a safe conduct through Ordos. Overjoyed at this turn of affairs, we made our adieux to the general, and begged him to order assistance to be given us in finding a lodging.

Escorted by several policemen, and followed by a huge crowd which waited in front of the Mandarin's house for us, we started in search of accommodation.

The policemen entered one house after another, and on being refused admittance, or, more correctly speaking, on receiving a bribe from the owner, led us further. At length we reached the house of a merchant, where soldiers were billeted, and here after a long altercation we were shown into a small and inconceivably dirty apartment. In vain we offered double payment for better rooms; none were obtain-

able, and we were obliged to content ourselves with the den assigned for our use.

We unloaded our camels, dragged everything into the house, and hoped to get some rest; but the crowd of people who filled the court-yard and street would not give us a moment's peace. We tried to close the doors and windows, but they were broken, and we were beset by an impertinent mob, some ruffianly-looking soldiers making themselves particularly offensive; they actually began feeling our persons, until a few kicks caused them to desist and retire a few paces, when they began abusing us. The policemen, incited by the offer of a liberal reward, exerted their utmost to keep the crowd back, and several fights ensued; at last they succeeded in closing the gates, but the inquisitive rascals climbed on the roof and let themselves down into the yard. This continued till evening, when they dispersed; and we lay down to rest, worn out with the fatigues of the day. But the heat was so suffocating, and the soldiers lodging in the house kept so continually. and unceremoniously entering our apartment, that we could not sleep, and we rose at daybreak with violent headaches, determined to purchase whatever we needed and take our departure as quickly as possible.

But no sooner did we venture into the streets than the experiences of the previous day were renewed. The mob surrounded us like a dense wall, despite the energy of the same policemen, who plied their long pig-tails like whips on either side to

clear a passage. We had hardly entered a shop before it was crammed with people, and its owner, frightened at the invasion of his premises, implored us to leave as soon as possible. At length with the assistance of our escort, we made our way into the yard of a merchant's house, and bought what we required in one of his back buildings.

On returning to our quarters we had the prospect of undergoing the same ordeal as on the previous day, but our police guard shut the gates and charged so much a head for admission. I must confess that it was not altogether pleasant to one's feelings to be made a public show of in this way, just as if we were some new kind of wild beasts; however, of two evils it was the lesser; at all events, sightseers now appeared in smaller numbers, and behaved in a more orderly way.

About mid-day the Mandarin sent a messenger to ask us to go and see him again. We accordingly started for his house, taking the watch with us. While awaiting our interview, we were shown into the soldiers' barracks, where we remained half-an-hour, and had an opportunity of inspecting the domestic arrangements of the Chinese soldiers. Five thousand military are quartered at Bautu, most of whom are from the south of China, the so-called '*Khotens*,' besides Manchus and a few Solones. All these men are armed with matchlocks, a few European muskets, swords, and long bamboo spears, with great red flags attached to the end of the shafts.

The demoralised and degraded state of the soldiery defies all description. They are the terror of the peaceable inhabitants, and are almost all opium-smokers. Lighted lamps are kept constantly burning in all the barracks, the smokers sit round in a circle, while others who have finished their pipes lie about the floor buried in lethargic sleep. The general, unable to cure his men of this vile practice, entreated us, on the occasion of our first interview, to tell him if there were not some antidote for opium, and offered a handsome reward if such could be found.

At this second visit we were ushered into the same apartment as before. After accepting the watch, the Mandarin asked us a great deal about Russia. 'Where was our capital?' 'What our system of agriculture?' and so on. He then examined our uniforms, down to the shirts and boots we wore. Tea was then handed round, and presents given us in exchange for those we brought, consisting of small silken bags in which Mongols carry their snuff-boxes attached to their belts. We thanked our host, and told him of our desire to depart immediately, requesting him to give orders that we should not be detained at the ferry across the Hoang-ho. The promise was duly given; we took our leave, and soon afterwards they brought us a pass ticket and our Peking passport, and we were then at liberty to continue our journey. We loaded our camels, and in the midst of a great crowd at length turned our backs on the town, and soon

arrived at the ferry of Lang-hwaisa, where we intended crossing the river.

Flat-bottomed barges, 28 feet long by 14 broad, serve to transport man and beast to the opposite bank. Their sides are three feet high, so that in the absence of a landing-stage all animals, including camels, have to climb over as best they may.

We had first to settle with the ferrymen about payment, and after a long dispute the price of 4,000 cash (about 12*s.*) was agreed upon. The camels were first unloaded, and all the baggage placed in the boat, the horses were then led on, and lastly the camels, but these brutes gave us great trouble from their timidity and natural aversion to water. Ten Chinese pushed from behind, while others pulled tackle attached to the fore-legs of the animals, and working through pulleys. At last, despite their resistance, they were forced on board, made to lie down, and tied to prevent their moving during the crossing.

After two hours' hard work our caravan was packed into the barge, and we were towed about a mile up the river with ropes, and then allowed to drift down with the current, as the rowers plied their oars towards the opposite bank. Here everything was very soon unloaded, and we entered Ordos.

CHAPTER V.

ORDOS.

Definition of Ordos—Nomads contrasted with settlers—Historical sketch—Divisions—The Hoang-ho and its floods—Route up the valley—Depth, width, and navigation of river—Old channels; deviation of its course—Disputes about boundaries—Flora of the valley—Scanty vegetation—Liquorice root—Aspect of valley changes—Kuzupchi sands—Terrors of the desert—Legends—Oases and their vegetation—Sterility of the valley—Birds and animals—Traces of Dungan insurrection—A stray camel—Intense heat—Lake Tsaideming-nor—Opium cultivation—Bathing—Superstition about the tortoise—Flight of Chinghiz-Khan's wife—Tradition of Chinghiz-Khan—The white Banner—Tomb of Chinghiz-Khan—The Kara-sulta, or Black-tailed antelope—Shooting these antelope—Their haunts in the desert—Ruined temple of Shara-tsu—Scarce population—Wild cattle—Their origin and habits—Two bulls shot—Fishing; Mosquitoes—Salt lake; Ruins of city—Order of march; sweltering heat—Water! the halt—Wolfish appetites; evening—Loss of a horse; Djuldjig—Arbus-ula range; Ding-hu—Crossing Hoang-ho—Interview with Mandarin—Showing our guns—Baggage examined—Mandarin robs us—Embarrassing situation—Under arrest—Explanations—We take our departure.

ORDOS is the country lying within the northern bend of the Yellow River, and bounded on the three sides, north, east, and west, by that river, while on the south it is bordered by the provinces of Shensi and Kansu.[1] Its southern boundary is defined by

[1] The country of the Ordus or Ordos, here called (as in the Russian) for brevity simply 'Ordos,' the position of which is sufficiently defined in the text, has received that name only in modern times. In ancient days it was called 'Ho-nan,' viz. the land *south* of the *Ho* or (Yellow) *River*; and by this name it is mentioned in the history of the Hiong-nu, the Huns of Deguignes, who in the first or second century of the

the same Great Wall which we saw at Kalgan. Here as well as there this wall separates the culture and settled life of China Proper from the deserts of the high plateaus which are habitable only by a nomad pastoral people. This contrast between two physically distinct parts of the surface of the globe —on the one side the warm, fruitful, well-watered Chinese lowlands intersected by mountain chains, on the other, the lofty, cold, and desert plateau— has influenced the fortunes of the nations inhabiting them.[1] As they differed in their mode of life and character, so they hated and lived apart from each other. Just as the dull, hard life of the nomad, with its many privations, was foreign and hateful to the Chinese, so the nomad on his side looked with contempt at the tiresome industry of his agricultural neighbour, and valued his wild liberty far higher than all the blessings of the universe. Hence arose a marked contrast between the characters of both nations. The painstaking Chinese, who in long-forgotten ages attained a comparatively high although

Christian era established themselves here, in order to have ready access to the fertile lands of Shensi. In the middle ages (tenth to thirteenth century), it formed part of the kingdom of Tangut, the capital of which was at Ninghia, on the Yellow River; and when Chinghiz-Khan conquered that kingdom it became a part of the Mongol Empire. It is obscure how the tribes occupying this territory got the name of *Ordos*. That title was specifically applied to the body of Mongols established in eight white *ordus* or encampments beside the sepulchre of Chinghiz, and a migration of their descendants is supposed by Ritter to have caused the transfer of the name to the territory, now so called. (Ritter, *Asien*, i. 505; *Timk.* ii. 266, *Schmidt.*)—Y.

[1] This idea is fully developed in Ritter's classical work, 'Erdkunde von Asien,' translated into Russian by Semenoff.

peculiar stage of civilisation, held warfare in abhorrence and regarded it as the greatest curse. On the other hand, the restless, wild inhabitant of the cold plains of what is now called Mongolia, inured to hardship, was ever ready for the foray and the raid. He had little to lose in case of misfortune, but if successful he carried off the accumulated labour of many generations.

Such were the conditions which impelled the

MONGOL CAVALRY (from a Photograph lent by Baron Osten Sacken).

nomads towards China, and the border of their plateau served as an admirable vantage-ground for their aggressions. Here whole hordes would assemble, and hence they would suddenly pour into the enemy's country. History has recorded several irruptions of this kind, from the Mongolian side as well as

from that of Manchuria. The Great Wall was no protection against these floods of barbarians, who in their turn were incapable of founding an empire on a sound basis of internal development. After a certain period of dominion, the barbarians, who had come into contact with a civilisation so entirely foreign to them, lost their warlike strength, the only foundation of their power, were driven on to the plateau, and even temporarily subjugated by China. In this way the latter, by an artful policy rather than by strength, often warded off the misfortunes with which the nomads from time to time threatened her.

Ordos, in its physical aspect, is a level steppe, partly bordered by low hills. The soil is altogether sandy, or a mixture of clay and sand, ill adapted for agriculture. The valley of the Hoang-ho is the only exception, where the Chinese population lead a settled life. The absolute height of this country is between three thousand and three thousand five hundred feet,[1] so that Ordos forms an intermediate step in the descent to China from the Gobi, separated from the latter by the mountain ranges lying on the north and east of the Hoang-ho or Yellow River.[2]

[1] The valley of the Hoang-ho, not far from Bautu (Si-pau-to), is 3,200 ft. abs. height, and 18 miles west of the town of Ding-hu (Chagan-subar-kan) by boiling water the elevation was found to be 3,500 feet.

[2] The Jesuit Père Gerbillon travelled through nearly the whole of the Ordos in 1697, and has left us an account of that country which agrees very nearly with that given by Col. Prejevalsky. He mentions that the Emperor Kang-hi, who seems to have combined in his person

In ancient times Ordos became the prey of different conquerors, who seized it in turn. In the middle of the fifteenth century A.D. the Mongols made their first appearance here, and afterwards, towards the end of the sixteenth and beginning of the seventeenth century, it fell under the power of the Chakhars,[1] who soon afterwards acknowledged the supremacy of the Manchu dynasty, which had usurped the throne of China. Ordos was afterwards organised on the same footing as the other nomad districts; and at the present day it is divided into seven banners, which are situated as follows: on the north, Talde and Hangin; on the west, Otok and Zasak; on the south, Ushin; on the east, Djungar, and in the centre, Van (Wang). There are no towns in this country.

As we have stated, Ordos forms a peninsula in the elbow made by the winding of the Hoang-ho. This river, one of the greatest of Eastern Asia, flows from an alpine country south of Lake Koko-nor, winds for a long way between gigantic chains of mountains, and at last at Ho-chau enters the confines of China Proper. From this point, or to speak more correctly from Lang-chau, the course of the Hoang-ho is north by a little east, which direction it preserves through five degrees of latitude. Then its

the qualities of a sagacious and energetic ruler with those of an intrepid sportsman, rode through the country from one end to the other, bow in hand, and killed many thousand head of game. (*Gerbillon* in *Duhalde*, iv. 463; Ritter, *Asien*, i. 155; *Deguignes, hist. gen. des Huns.* i. 142.)—M.

[1] At that time Ordos received its present name; in ancient times this country was called *Ho-nan*, and still earlier, *Ho-tau*.

tendency to flow to the north being checked by the obstructing Gobi and the In-shan mountains, the river makes another bend to the east, and near the town of Kai-fong-fu the principal channel disembogues in the Gulf of Pechihli, whilst another lesser branch flows into the Yellow Sea. The change in the lower course of the Hoang-ho occurred as recently as 1855, when, after forcing a passage through the embankments near Kai-fong-fu, the river took a new course towards the Gulf of Pechihli, where it now discharges at a distance of 270 miles to the north of its former mouth.[1]

The capricious windings of the Hoang-ho, and the heavy rainfall in summer in the hilly districts on its upper course, occasion frequent and extensive inundations which sometimes cause disastrous losses to the inhabitants.

After crossing into Ordos, instead of taking the shortest diagonal route, followed by Huc and Gabet,

[1] In all our ordinary maps the Hoang-ho enters the sea in lat. 34°, south of the great peninsula of Shan-tung. This was its true course down to some twenty years ago, and for six centuries before that. But in the earliest times of which the Chinese have record the Hoang-ho discharged into the Gulf of Pechihli, i.e. north of Shan-tung and its mountains, and it continued to do so, though with sundry variations of precise course, till the thirteenth century A.D. Before the latter period the river had occasionally thrown off minor branches to the south of Shan-tung, but it then changed its course boldly to the latter direction, and so continued till our time. The tendency to break towards the old northern discharge had long existed, and was resisted by a vast and elaborate series of embankments. These gave way partially in 1851 : following floods enlarged the breach, and in 1853 the river resumed its ancient course across the plains of Pechihli, and now enters the gulf of that name in lat. 38° (*circa*). A sketch map of these variations is given in 'Marco Polo,' 2nd ed., ii. 126, where references to the chief authorities will also be found.—Y.

and the former missionaries (Martini and Gerbillon), we determined to keep in the valley of the River. This route afforded greater interest for zoological and botanical researches than could be found in the sandy wastes in the interior of Ordos; besides which we wished to settle the question of the bifurcation of the Hoang-ho in its northern bend.

We marched along the River for 290 miles from the ferry opposite Bautu to the town of Ding-hu,[1] and the conclusion we arrived at was that the river does not divide into separate channels in its northern bend, as is usually represented on the maps, and that this part of its course has undergone a change. For the sake of clearness, I will first give a general sketch of the character of that part of the River and its valley which we surveyed, and then continue the narrative of our journey in Ordos.

Winding considerably for so large a river, the Hoang-ho flows at the rate of 300 feet a minute[2] through a valley bounded on the north by the In-shan and its western continuations, and on the south by a belt of drift sands known to the Mongols under the name of Kuzupchi. The banks of the river and its bed are composed of slimy clay; the water is very thick, and when standing for a short time deposits 1·3 per cent. of mud. However, the thick

[1] Marked *Chagan-subar-kan* on Klaproth's and Kiepert's maps.

[2] [Nearly 3½ miles an hour.] We observed this velocity of current near the shore during our crossing near the town of Bautu; in mid-stream the river was more rapid, but the velocity of the current depends on the high or low state of the water; when we crossed it was about the average level.

solution of clay suspended in the water does no harm, if the water be allowed to settle a little before use.

The depth of the Hoang-ho is nearly uniform throughout, varying according to the high or low level of the river. I measured the width opposite the town of Ding-hu with a compass, and found it to be 1,421 feet. Opposite Bautu I had no opportunity of measuring it, owing to the strict watch which the Chinese kept on us during the crossing. But, when the waters are at an average height, its width there is much the same, perhaps a little broader. The depth of the river is considerable, and it is unfordable in any part; it could be easily navigated by river steamers. At all events, large boats constantly pass backwards and forwards with supplies for the Chinese garrisons on its left bank. The voyage from Bautu to Ning-hia-fu is said to take forty days, whereas only seven days are required to float down stream between these points.

In that part of its course which we surveyed, the Hoang-ho is not subject to inundations, but flows between low level banks; the clayey soil and rapid current accounting for the constant abrasion and falling in of its banks.

From the meridian of the westernmost end of the Munni-ula mountains several channels, 170 to 290 feet wide, separate on either bank from the main river, soon uniting again with the parent stream; only one, the Baga-khatun, continues to flow in an independent stream for some distance to the east.

The channels marked in the map on the right bank of the northern bend of the River (west of the Munni-ula) have ceased to exist, owing to the change in its course, which has deviated 33 miles to the south of the former channel. The old channel, called Ulan-khatun by the Mongols, is well preserved, as we saw on our return journey from Ala-shan to Peking. The Mongols told us most positively that there were two channels between the old bed and present channel of the River, which continue to the western extremity of the Munni-ula, where some other branches again divide from the River. In all probability these two channels are those which some maps show as on the south side of the Hoang-ho. But in fact the main stream now flows in the third, i.e. the southernmost of the three.

This important change in the course of the River probably occurred at no very remote period. In support of this presumption I should mention that the Ordos country is reckoned to extend, beyond the present course of the River, as far as the old channel. There is a tradition among the inhabitants that one year the Hoang-ho, after unusually heavy summer rains, changed its former for a more southerly direction, when a dispute arose between the Urutes[1] and the Ordos about the boundaries of their respective territories. A commission was sent

[1] The *Úrút* or Orat form a tribe of three banners on the north of the Hoang-ho, about 120 miles west of Kuku-khoto. (See *Timk.* ii. 263.)—Y.

from Peking to examine into the affair, and this finally decided that the territory of the Ordos must be considered to be the same as before, i.e. to extend to the desiccated river bed. Even at the present day parts of the same koshungs (banners) of Ordos lie on both banks of the Hoang-ho, another proof that the River entered its new channel after the subdivision of the Ordos country into the present koshungs.

The valley of the Hoang-ho, in that part of its course which we are describing, is from twenty to forty miles broad, and of an alluvial clayey soil.[1] On the northern side of the river the valley widens considerably to the west of the Munni-ula mountains, while its southern shore is narrowed by the sands of Kuzupchi, which approach close to the river.

The northern side of the valley, with the exception of a narrow strip of land near the hills, where the soil is sandy and stony, is well adapted for cultivation, and is thickly covered with Chinese villages. The same remark applies to the southern bank of the River, from the place[2] where we crossed almost to the meridian of the western corner of the Munni-ula. This part of the valley is everywhere covered with grass land, intersected by a few streams, and in

[1] We sometimes arrived at pure sand beneath a surface stratum of clay not exceeding two or three feet in thickness. But the alluvial deposit near the river must be considerably more, because the above result was obtained near the sands of Kuzupchi, therefore quite at the verge of the valley of the Hoang-ho.

[2] It should be mentioned that the fruitful cultivated valley on the southern shore of the Hoang-ho extends much further eastwards than the point of our crossing that river.

places further removed from the River small marshes and lakes are formed. On the flooded meadow land the following flora appears: *Odontites rubra*, *Aster Tataricus*, *Panicum Mandshuricum*, *Calystegia acetosafolia*, *Echinops Turczaninovii*, *Sonchus brachyotis*, *Statice aurea*, *Sophora flavescens*, *Cynanchum acutum*, *Vincetoxicum Sibiricum*, *Vincetoxicum* sp.; varieties of *Ranunculus*, *Tanacetum*, *Oxytropis*, *Plantago*, *Stachys*, *Spergularia*, *Adenophora*, &c. It may be seen from the above list that parts of these meadows closely resemble our fields in Europe. Nearer the River grow the thick worm wood (*Artemisia* sp.), lyme-grass (*Elymus* sp.), and willow (*Salix* sp.), which further westward completely covers large areas. The marshes and their borders are thickly overgrown with reeds (*Phragmites communis*); in the uncovered spots appear the water plantain (*Alisma Plantago*), the water asparagus (*Hippuris vulgaris*), some kinds of *Scirpus*, *Elæocharis*, *Cyperus*, *Juncus*, *Utricularia*, *Cicuta*, *Butomus*, *Monochoria*, *Pedicularis*, *Lactuca*.

The sands of Kuzupchi do not come quite close up to this part of the valley of the Hoang-ho, but are separated from it by a border of sand mixed with clay which terminates in a precipitous bank, 50 feet and in some places 100 feet high, in all probability once forming the river shore.

This border is covered with small mounds (seven to ten feet high), mostly overgrown with wormwood (*Artemisia campestris*) and Siberian pea-tree (*Caragana* sp.). Here we found one of the

characteristic plants of Ordos, the liquorice root (*Glycyrrhiza Uralensis*), called *Chihir burja* by the Mongols, and *so* or *soho* by the Chinese. This plant, which belongs to the leguminous order, has a root four feet long and upwards, with a thickness of two inches near the stem. These are, however, the dimensions of the full-grown plant; the roots of the young specimens are about the thickness of a finger, although their length is from three to four feet; iron spades with wooden handles are used to dig up this root. The labour of extracting it from the ground is very heavy, because it grows downwards almost vertically into a hard clayey soil, and is found in waterless districts where the workmen are exposed to a burning sun.

A party of labourers, generally Mongols, men and women, hired by the Chinese, on first arriving at the place, establish a depôt for storing the roots obtained every day. Here they are laid in a pit to preserve them from the sun; the next process is to cut off the thin end and the lateral offshoots. Then the roots are tied in bundles like sticks, each bundle weighing 100 hings (about 130 lbs.), loaded on boats, and despatched down the Hoang-ho. The Chinese told us that the liquorice root was sent to Southern China, where a particular kind of cooling drink is prepared from it.[1]

[1] Liquorice root is much used in China, and is largely produced in some of the northern provinces; in 1870 6,954 peculs (=927,200 lbs.), were shipped from Chefoo, and 1,304 peculs (=173,866 lbs.), from Ningpo. (*Reports on Trade at the Treaty-Ports, &c.*, Shanghai, 1871, from *Hanbury and Flückiger's Pharmacographia*, p. 156.)—Y.

From the meridian of the western extremity of the Munni-ula, the character of the valley on the southern shore of the Hoang-ho as we ascend the River changes a good deal. The soil, which was heretofore dense and fertile, is now mixed with salt, so thick in some places as to cover the ground with a white layer; there are none of those marshes or rivulets which are occasionally seen in the preceding section, and, except in the great river itself, not a drop of water can be found.

As the soil changes so does the vegetation. The flowery fields [1] disappear, and in their stead the reed grass (*Calamagrostis* sp.), and *Lasiagrostis splendens* cover the valley. The latter grows in tufts as high as seven feet, and is so tough and wiry as to make it difficult to pluck a single stalk. Clumps of bushes become more frequent, often covering extensive areas along the banks of the Hoang-ho.[2] The prevailing kind of shrub is a species of tamarisk, which is sometimes as high as twenty feet, with a stem three or four inches thick.

The sand-drift which in the former section was 12 to 15 miles from the bank of the Hoang-ho, now approaches nearer and throws out occasional arms to the River itself. These sands, as we have said, are called by the Mongols *Kuzupchi*—a name which

[1] In the valley of the Hoang-ho and the oases in the sands of Kuzupchi, we gathered, between the middle of July and end of August, 137 kinds of flowering plants; in the mountains of Munni-ula, between the end of June and beginning of July, 163 kinds; but some of the latter were also found in the valley of the Yellow River.

[2] These bushes also grow on the opposite shore of the Hoang-ho.

signifies *collar*, and is very appropriate on account of the distinct fringe which they form along the valley, from the meridian of Bautu for 200 miles up its course, where they cross to the left bank and cover the whole of Ala-shan. The sands of Kuzupchi are a succession of hillocks (40, 50, rarely 100 feet high) lying side by side and composed of yellow sand. The upper stratum of this sand, when disturbed by the wind blowing on either side of the hills, forms loose drifts which have the appearance of snow-drifts.[1]

The effect of these bare yellow hillocks is most dreary and depressing when you are among them, and can see nothing but the sky and the sand; not a plant, not an animal, is visible, with the single exception of the yellowish grey lizards (*Phrynocephalus* sp.) which trail their bodies over the loose soil and mark it with the patterns of their tracks. A dull heaviness oppresses the senses in this inanimate sea of sand. No sounds are heard, not even the chirping of the grasshopper; the silence of the tomb surrounds you. No wonder that the local Mongols relate some marvellous stories about these frightful deserts. They tell you that this was the scene of the principal

[1] The subsoil of the sands of Kuzupchi is hard clay, the same as the valley of the Hoang-ho. This phenomenon remarkably confirms the hypothesis of Ordos having once been the bed of a lake which forced a passage for itself to the ocean by the present channel of the Hoang-ho; the former shallows of this lake are now sand-drift. The probability of this conjecture being true is further confirmed by the historical documents of the Chinese which make mention of great inundations in the region of the modern Hoang-ho, 3,100 and 2,300 years B.C.—Ritter's *Erdkunde von Asien.* [See Supplementary Note.]

exploits of two heroes—Gissar-Khan [1] and Chinghiz-Khan: here these warriors fought against the Chinese, and slew countless numbers of people whose bodies God caused the winds to cover with sand from the desert. To this day the Mongols relate with superstitious awe how groans and cries may be heard in the sands of Kuzupchi, which proceed from the spirits of the departed, and that every now and then the winds which stir up the sand expose to view different treasures such as silver dishes, which, although conspicuous above the surface, may not be taken away, because death immediately overtakes the bold man who would venture to touch them.[2] According to another tradition, Chinghiz-Khan, when hard pressed by his enemies, placed the sands of Kuzupchi as a barrier on one side and turned the Hoang-ho from its former channel to the north as a protection against attack on the other.

[1] Gissar or Khassar, the next brother of Temujin (i.e. Chinghiz-Khan), called in Kalmuk stories *Khabutu Khassar*, i.e. Khassar the Archer, was renowned for his great strength and skill with the bow, and is the subject of many Mongol legends, of which examples will be found in Sanang Setzen, in Bergmann (*Nomadische Streifereien*, iii. 233), and in Pallas, *Sammlungun Histor. Nachricht.* i. 24). There is also a Tibetan version of the legends. The group of Mongol tribes called the Korchin claim descent from Khassar-Khan.—Y.

[2] A long note on the superstitious terrors of Deserts, and of the Gobi in particular, will be found in 'Marco Polo' (Book I. ch. xxxix., and see also beginning of ch. lvii.). The stories of treasure in the same desert are probably connected with the general belief (apparently founded on facts), of the former existence of cities in various parts of the borders of the Gobi, which have been overwhelmed with sand. 'That treasure is reputed to be found in these is a matter of course, but that *tea* is found in one of them at least, is a more uncommon circumstance, and appears to be a matter of fact.' See *Quarterly Review* for April 1873, p. 526.—Y.

However, the sands of Kuzupchi, which the Mongols say are from 10 to 50 miles wide, are not in all parts the land of death and desolation. Nearer the extreme edge, small oases may be seen covered with a variety of plants, amongst which we noticed the pretty shrub *Hedysarum* sp., completely covered in the month of August with pink blossoms; a few small trees also grow here—*Calligonum* sp., *Tragopyrum* sp., and the remarkable cross-shaped *Pugionium cornutum*. Only two specimens of this rare plant have as yet been brought to Europe, viz., in the last century by the naturalist Gmelin; they are preserved in the museums of London and Stuttgardt. To my great regret I was unaware of the rarity of the *Pugionium*, and therefore only gathered a few specimens which I placed in my herbarium with other kinds. This plant is often met with in the sands of Kuzupchi, where it grows like a shrub to the height of seven feet, with a stem 1 to 1½ inch thick near the root.

Two hundred miles to the west of the meridian of Bautu, the sands of Kuzupchi cross to the left bank of the Hoang-ho, whilst the valley of the river (on its right bank) again changes its character and becomes quite sterile. Coarse sand is mixed with the clayey saline soil, and the valley itself, especially nearer the bank of the River, is seamed with the beds of dry watercourses which drain off the rainwater. Vegetation becomes very scanty, so much so that the soil is for the most part bare and studded with little mounds (3 to 6 feet high), on

which grow the low stunted *Nitraria Schoberi*, *Zygophyllum* sp., and another shrub of the leguminous order with a leathery leaf which is not deciduous.

These hillocks are formed by the wind which raises the sand and dust. Both one and the other are caught by the low brushwood, and as they gradually collect they form small mounds which are bound together by the roots of the bushes; the rains wash the sides down, giving them the appearance of having been dug with a spade.

Instead of the sands of Kuzupchi, undulating hills now border the valley, gradually becoming higher and higher till at length they culminate in a lofty rocky ridge opposite the town of Ding-hu, whence they run parallel with the course of the River for some distance to the south. These hills, as far as we could see, bear the same desolate aspect as the valley. In all probability the interior of the whole of Ordos is of the same character, and fully bears out its name of *Boro-tohoi*, i.e. grey (not green) plain.

The absolute height of the valley of the Hoang-ho in that part which we visited changes very little. By boiling water on Lake Tsaideming-nor we obtained 3,200 feet; 18 miles west of Ding-hu,[1] 3,500 feet; and nearly half way between these points, at the foot of the hills bordering the left bank of the river, again 3,500 feet.

Animal life is not very abundant in the valley of

[1] This place properly belongs to the plain of Ala-shan.

the Hoang-ho. Of the mammals there are the black-tailed antelope (*Antilope subgutturosa*), hares (*Lepus Tolai*), foxes, wolves, and small rodents. Of birds those we saw were mostly pheasants (*Phasianus torquatus*), larks (*Alauda arvensis*, *A. pispoletta*? *Galeria cristata*?) Wheat-ears (*Saxicola deserti*; *S. œnanthe*), and hoopoes (*Upupa Epops*). On the marshes and lakes were geese (*Anser cygnoides*, *A. cinereus*), ducks (*Anas boschas*, *A. acuta*, *A. rutila*, and others), marsh harriers (*Circus rufus*, *C. spilonotus*), terns (*Sterna leucoptera*, *Sterna* sp.), stilts (*Hypsibates himantopus*), avosets (*Recurvirostra Avocetta*), snipe (*Scolopax gallinago*, *S. megala*?) and small sand-pipers (*Totanus ochropus*, *T. glareola*, *Tringa subminuta*). On the River itself there were gulls (*Larus ridibundus*, *L. occidentalis*?) and a fishing-eagle (*Haliætos Macei*) may often be seen seated motionless on the precipitous banks. Ordos, like the whole of Mongolia, is so poor in birds that we only found 104 kinds in the valley of Hoang-ho and among the oases in the sands of Kuzupchi. It is probable that there are not many kinds of fish in the River. At all events we only caught six species in our small net—the Silurus (*S. asotus*), carp (*Cyprinus carpio*), the crucian carp (*Curassicus vulgaris*), dog-fish (*Squalius Chinensis*), and two new kinds, perhaps two new genera, of the family of *Cyprinidæ*. We also procured some specimens of tortoises (*Trionyx* sp.), which are found in great numbers in the Hoang-ho.

As regards population in Ordos since the devastation caused by the Dungan insurrection in

1869, the valley of the Hoang-ho is inhabited only for sixty miles to the west of the ferry of Langhaisa; beyond that point there is no one, and even the footpaths are so overgrown with grass that not a trace of former inhabitants remains. You may occasionally see a ruined village or the skeleton of a Mongol killed by Dungans half devoured by wolves. We were reminded of the words of Humboldt, who remarked that the historian who traces back past ages, and the geographer who travels over the earth, find everywhere the monotonous desolate picture of warring humanity.

We will now return to the narrative of our journey. The day following our crossing the Hoang-ho we were also obliged to cross its arm the Bagakhatun, which is 350 feet wide and 6½ miles distant from the main river. The ferry, called Li-vang-ti, is kept by Chinese, who extorted a good sum for taking us over. We pitched our tent on the other side with the intention of continuing our journey early the following morning. We were, however, quite unexpectedly detained here four days. The reason of this was first a heavy rain, which poured in torrents the whole day, soaking the clayey soil of the valley of the Hoang-ho to such an extent that our camels were quite unable to proceed; then one of our camels recently bought at Bautu strayed, and the Cossack and Mongol were two whole days looking for it.

In the meanwhile we were obliged to wait at the ferry of Li-vang-ti, where our tent was constantly

beset by all the Chinese and Mongols who passed by, and well nigh exhausted our patience with their impudence. Once some Chinese soldiers actually demanded one of our guns or a revolver, and threatened, in case of our refusing to give them, to come in a body and take them from us.

At last the strayed camel was recaptured, and we set out for Lake Tsaideming-nor, about which we had heard from the Mongols. On the shores of that lake, which were reported to abound in game and good pasturage, we hoped to pass a fortnight, in order to rest our exhausted camels. We ourselves also required rest, besides that by staying in one place for a time we could study the flŏra and fauna of the Hoang-ho better. During the month of July, too, the heat every day is so intense that it is almost impossible to march even short distances with pack animals. The thermometer certainly did not mark over 37° Cent. (98° Fahr.) in the shade, but the sun burnt fiercely and sometimes heated both sand and clay to 70° Cent. (158° Fahr.); the camels could not set the bare soles of their feet on the burning soil, and their legs trembled with the pain. The water in the River became warmed to 24·5° Cent. (75° Fahr.); but in the lakes and marshes the temperature increased to 32·3° Cent. (90° Fahr.). The rains, which fell frequently and were usually accompanied by thunder, only temporarily refreshed the atmosphere. As soon as the clouds cleared away the sun's rays came down as hot as ever, and the heat became the more unbearable owing to

the dead calm of the atmosphere, only occasionally stirred by a light south-westerly breeze.

Our expectations with regard to Lake Tsaideming-nor[1] were realised. This marshy lake literally swarmed with ducks and geese which supplied us with food; the camels pastured unmolested on the neighbouring meadows; and we procured as much butter and milk as we required from the Mongols encamped near the lake. To add to our comforts, we were encamped by the side of the Tahilga, a clear stream flowing into the lake, in which we could bathe as often as we liked. In fact, never before or afterwards were we so well off in Mongolia.

On the road to Tsaideming-nor we passed another lake, Urgun-nor, on the banks of which, and in the adjoining valley of the Hoang-ho, there is a tolerably thick Chinese population mixed with Mongols, who live partly in yurtas and partly in houses. Some of the latter cultivate the soil, but they dislike labour, and their fields may be at once distinguished from those of the Chinese. In one respect only are the Mongols not behind the Chinese, viz. in smoking opium. This frightful vice is terribly prevalent in China, into which opium is imported by Englishmen from India. The Chinese also prepare it for themselves, and plant whole fields with the poppy. But its cultivation being forbidden by law, those fields of poppy which we saw in the

[1] Lake Tsaideming-nor is actually a marsh, thickly covered with reeds and different kinds of marshy grasses.

valley of the Hoang-ho were planted in the midst of thick cane brake and tall rushes to hide them from official scrutiny. Not that the officials destroy the forbidden crop, they only extort a large bribe from its owner as a penalty for his contraband cultivation.

The custom of smoking opium has spread rapidly from the Chinese to the neighbouring Mongols, but has not yet penetrated into the remoter parts of Mongolia. Opium-smokers have such a passion for their poison that they cannot exist without it even for a few days. It injuriously affects the whole organism. Every opium-smoker may be at once known by his pale, prematurely old face and attenuated body. I myself once tried smoking a little opium : it produced no effect whatever on me, and its taste reminded me of burnt feathers.

From our camp on the bank of the little river Tahilga we daily sallied forth on scientific and shooting excursions, and in the hottest weather rested and often bathed. Our Cossacks were afraid of indulging in the last-named pleasure for fear of the river-tortoises.[1] The Mongols attribute peculiar magic powers to these creatures, and in proof of their assertion show you some Tibetan letters which they say are marked underneath the body. They frightened our Cossacks by telling them that the tortoise fixes on to the bodies of persons bathing with such a firm grip that it is impossible to make it let go. The only remedy in such case is to

[1] The same kind of tortoise as we had seen in the Hoang-ho, *Trionyx*, sp.

fetch a white camel or goat, which on seeing the adhering tortoise utters a cry, and then the creature drops its victim of its own accord.

The Mongols told us that there were no tortoises formerly in the Tahilga, but all of a sudden these strange creatures appeared. The astonished inhabitants did not know what to do, and in their dilemma asked the advice of the gigen [or living Buddha] of the nearest temple, who told them that the newly-arrived tortoise would make itself master of the River and that it was a sacred animal. Ever since then, once a month, a religious service is held at the source of the Tahilga by the lamas of the neighbouring temple.

In order to fix the latitude of Lake Tsaidemingnor I made an astronomical observation. The Mongols did not know what to make of my occupation, and began to suspect me to be a conjuror. Fortunately I remembered that in the end of July,[1] exactly at the time I was making my observation, a number of falling stars would appear in the heavens; accordingly, after finishing my work, I told the assembled crowd that stars would shoot across the heavens that night. At any other time the Mongols would have paid no attention to such a phenomenon, but now they all wished to test the accuracy of my prophecy, and having satisfied themselves of its correctness that night, they no longer looked on me with suspicion. This shows how a little presence

[1] i.e. *Old Style*, corresponding to N. S. August 9—11, one of the periods of meteoric showers.—Y.

of mind will assist the traveller in the most trifling circumstances. For instance, we boiled water for fixing altitudes openly, often in the presence of Mongols, to whom we used to explain that this was our manner of praying to God.

A little more than seven miles to the north-east of Lake Tsaideming-nor, not far from the shore of the Hoang-ho, stands a tolerably high conical hill, called by the Mongols Tumyr-alhu, and by the Chinese Dju-djing-fu. Here, the Mongols say, the wife of Chinghiz-Khan is buried. The tradition runs as follows. One of the Mongol princes, by name Gichin-Khan, had a beautiful wife who pleased the great warrior so much that he threatened to make war if her lawful husband did not resign this woman to him. The terrified prince agreed to this demand, and Chinghiz-Khan set off for Peking accompanied by his bride. In passing through the country of the present Chakhars, the beautiful captive escaped from her lord and fled in the direction of the Hoang-ho; on the opposite bank of this river she piled up a mound of earth with her own hands and hid in it. When the pursuers sent by Chinghiz-Khan approached her hiding place, the unfortunate woman, despairing of safety, threw herself into the River, whence the Mongols call it to the present day the Khatun-gol, i.e. Lady's River.[1] The body of

[1] This would seem to be a variation of the legend related by Sanang Setzen the Mongol poetical chronicler. According to this it was on the final conquest of Tangut by Chinghiz (1227), that Kurbelyin Goa Khatun, the beautiful wife of the king of that country, was transferred to the tent of the conqueror. She did him some bodily mischief (it is not said what), and then went and drowned herself in the Karà-muren

the drowned woman was recovered, and by command of Chinghiz-Khan buried in an iron coffin in the very mound which she had made to hide in; this hillock is called Tumyr-alhu.

Chinghiz-Khan's memory is better preserved in Ordos than in any part of Mongolia; at all events, we heard more tales here about the conqueror than anywhere else. The most interesting of these legends are those relating to the white banner and the future resurrection of Chinghiz-Khan.

The first tells how Chinghiz-Khan was a great hunter, and while following the chase one day in the mountains of Munni-ula he met there a Russian engaged in the same pursuit. Chinghiz-Khan enquired of him how long he had been hunting, and how many beasts he had killed? 'For some years,' answered the stranger; 'but I have only killed one wolf.' 'How is that?' said the conqueror; 'I have killed several hundred animals in the same time.' 'But my wolf was a wonderful beast,' replied the Russian; 'he was fourteen feet long, and every day devoured ten other animals; by slaying him I have done more good than you.' 'If that be the case,' exclaimed Chinghiz-Khan, 'thou art a brave fellow; come with me to my yurta, and I will give thee whatsoever thou desirest.'

The Russian hunter, at the invitation of Chinghiz-Khan, accompanied him to his yurta. Here, what pleased him most was one of the concubines of the

(or Hoang-ho), which thenceforth was called by the Mongols the *Khatun-gol* (Schmidt's *Sanang Setzen*, p. 103).—Y.

great warrior, who, to keep his word, was obliged to give his guest the woman he asked for. But as she was one of Chinghiz-Khan's favourites, on parting with her he gave her a white banner. With this present the Russian and his bride departed for Russia. Where they settled is not known; 'but,' say the Mongols, 'the white banner of our great sovereign is still in your country.'

Another and even more interesting tradition about Chinghiz-Khan runs as follows. The ashes of this hero, the Mongols assert, rest in a temple in Southern Ordos in the koshung (banner) of Vang, 130 miles to the south of Lake Tabasun-nor.[1] Here the body of the great warrior is laid in two coffins, one of silver, the other of wood, placed in a yellow silken tent in the centre of the temple; here too, beside the coffin, lie the arms of Chinghiz-Khan. Some 6 miles from the chief temple another smaller shrine has been built, in which are buried twenty of his nearest relatives. On his death-bed he told them that he would rise again after the lapse of not more than a thousand years, and not less than 800. In Chinghiz-Khan's tomb lies the figure of a man apparently asleep, although no mortal can account for this phenomenon. Every evening a roasted

[1] This tradition, however, does not agree with history, according to which the body of Chinghiz-Khan, after his death in 1227 A.D., near the town of Ning-hia, was carried to the north and buried not far from the sources of the Tola and Kerulen.—Ritter's *Erdkunde von Asien.*

Sanang Setzen agrees with the Mahommedan writers in representing that the body of Chinghiz was carried to his native country. It would seem that his tomb was on or beside the Khanola mountain near Urga.—Y.

sheep or horse is placed near the dead man, and by the morning it is all devoured.

The Mongols reckon that 650 years have elapsed since his death, leaving 150 to 350 years more before his coming resurrection. The same people assert that on the very day of the accomplishment of this miracle, some hero will be born in China with whom Chinghiz-Khan will do battle, subdue him, and lead his people from Ordos to what is now called the land of the Khalkas, the native country of the Mongols.

We could not discover the name of the temple where Chinghiz-Khan is said to be buried. The Mongols, for some reason or other, would not divulge it. Great numbers of pilgrims annually visit it.

After ten days' halt near Lake Tsaideming-nor we ascended the valley of the Hoang-ho. Our first march was to the Kurei-hundu, and the second to the Kurai-hundu, the last rivulet we saw in Ordos. Both these streams flow from the interior of that country; they are neither wide nor deep, but their current is very rapid and muddy; after a fall of rain the water is almost as thick as treacle. The Mongols have also invented an explanation of this. They say that owing to the muddiness of the Hoang-ho, it will not receive any clear streams as tributaries, and therefore the Tahilga flows into Lake Tsaideming-nor instead of into the main river, which rejects its transparent waters.

We remained three days on the river Kurai-

hundu, devoting the whole time to the chase of the black-tailed antelope, which we first saw here.

The black-tailed antelope, or, as the Mongols call it, the kara-sulta[1] (*Antilope subgutturosa*), in size and appearance closely resembles the dzeren, but differs from the latter in its black tail (seven to eight inches long), which it holds up and often switches from side to side. This antelope inhabits Ordos and the desert of Gobi, being distributed as far north as about 45° N. lat. On the south it is met with throughout Ala-shan as far as Kan-su, and then, omitting this province and the basin of Lake Koko-nor, it is again found in the saline marshy plains of Tsaidam.

It selects for its habitation the wildest and most barren parts of the desert, or small oases in the midst of sand-drifts. Unlike the dzeren, it avoids the rich pasturage and is satisfied with the scantiest food in its endeavours to shun mankind. We were always at a loss to know what it could find to drink in such spots. Certainly, judging from its tracks, it will visit by night a spring or even a well, but we have found it in a barren desert where not a drop of water could be found for 60 or 70 miles round. It can probably exist for a long time without water, feeding on a few juicy plants of the kali family.

The kara-sultas are generally found single, in pairs, or in small detachments of three to seven; it very rarely happens, and that only in winter, that

[1] Kara-sulta signifies 'black-tailed.'

fifteen or twenty head are seen together, but we never once saw more than this. The herd never mixes with the dzerens even if it graze on the same pastures, which seldom occurs.

It is much shyer than the dzeren, and owing to its excellent sight, hearing, and smell, easily escapes the snares of the hunter, being in common with other antelopes, very hard to kill, which increases the difficulty of the chase.

They feed in the evening and early morning, lying down, during the day under the lee of a hillock where they are sheltered from the wind. It is extremely difficult to mark one of these animals when reposing, on account of their colour so closely resembling that of the sand or the yellow clay. They are better discernible whilst grazing, or if they happen to be standing on the summit of a hill, where they will sometimes remain stationary for an hour at a time. This is the best and only opportunity the sportsman can have of stalking them.

If startled the kara-sulta bounds off for several hundred paces, then stops and looks at its pursuer for a few minutes, before resuming its flight. It is useless attempting to follow on its tracks; the animal will probably go a long distance and will be more cautious than ever.

My companion and I wasted a good deal of time and labour before we shot our first kara-sulta. The first and second days we were unsuccessful, and only on the morning of the third I succeeded in bagging a fine buck after a good stalk. One ought really

not to fire at a single kara-sulta or at a dzeren above 200 yards; for nine out of ten shots you fire beyond that range will to a certainty be wasted. In practice, however, this rule is difficult to observe. Assuming that you have been walking for an hour or two, climbing from the top of one hillock to another, sinking knee-deep in the loose sands with the perspiration pouring from your face, and that all of a sudden you see the coveted animal before you, but above 200 yards off. You are well aware that you cannot approach any closer; that if you are not very careful you may never see it again; that every minute is of value; and lastly, that you hold a rifle in your hands which will carry a long distance and hit the smallest object; with all this, can you resist the temptation of a shot? You raise the sight on your rifle, lie down, take a steady aim; the gunpowder flashes fire, and the bullet buries itself in the sand, having either fallen short of or gone beyond the antelope, which is out of sight the next moment. Provoked and disgusted with your ill luck, you examine the spot where it stood, and on measuring the distance, you find that you are forty paces or more out of your reckoning. This is a great mistake to make, but it is unavoidable when you have to estimate your distance suddenly, often in a recumbent position, with your head only just raised above the hillock and when it is impossible to see any intermediate objects. Doubtless a rifle with a long point-blank range in this instance is the

best of all; but we had none with us during the first year of the expedition.

I have stated that the kara-sulta frequents the wildest part of the desert; but on one occasion, whilst returning from Ala-shan to Peking, in November 1870, we saw a number of these antelope in the valley of the Hoang-ho near the Sheiten-ula range, where they kept near the Chinese population and the cultivated fields. Here, contrary to their habits, they were the reverse of shy, of course because they had become accustomed to man, and had never been hunted. Their rutting season is in November; the young ones being born in May. These creatures are far less numerous in Mongolia than the dzeren.

Soon after leaving the Kurai-hundu, we arrived at the Mongol temple of Karganti, whence there is a road across the sands of Kuzupchi to the salt lake of Tabasun-nor. This lake, described by Huc,[1] is about 66 miles from the shore of the Hoang-ho, and according to the Mongols about 20 to 25 miles in circumference. The salt obtained here is taken to the neighbouring provinces of China.

Leaving the Tabasun-nor road on one side, we continued our journey up the valley of the Hoang-ho, and after a day's march came to another temple demolished by the Dungans, called Shara-tsu. At this temple, one of the most important in the whole of Ordos, as many as 2,000 lamas and two or three

[1] Huc, *Souvenirs d'un Voyage dans la Tartarie et le Thibet*, t. i. pp. 330–334.

gigens [or living Buddhas] formerly resided; but not a soul remains there now. Only some flocks of rock doves, jackdaws, and swallows build their nests in the ruined shrines and houses. The latter, i.e. the houses, which surround the temple, are for the most part uninjured; but the chief shrine, with its outbuildings within the enclosure, is burnt down; the clay idols smashed or hacked to pieces, littering the ground; a few still on their pedestals, but cut and disfigured by swords and pikes; the great statue of Buddha in the principal temple with a large hole in its chest, made by the Dungans in their search for treasure often hidden by the lamas in such places; and leaves of the sacred book *Gandjur*[1] strewn over the floor, together with other broken fragments; all covered with a thick layer of dust.

And yet not very long ago many thousands assembled here to worship the image of their saint. Here, as in other temples, everything was done to attract and arrest the childish imagination of the Mongols; many of the gods are represented with stern and hideous faces; some seated on lions, elephants, oxen, or horses; others slaying serpents, devils, &c., and the walls of the temple that remain standing are also decorated with pictures of the same *genre.*

'How can you put faith in gods of clay?' I remarked to the Mongol who accompanied me over the ruins of the temple. 'Our gods,' he answered, 'only

[1] See Supplementary Note.

lived in these idols, but they have now flown to the skies.'

Beyond the temple of Karganti, ascending the southern shore of the Hoang-ho, we met no more inhabitants, and only passed two or three small Mongol stations whose occupants were engaged in obtaining liquorice-root. The reason this country is so deserted is, as we have said, owing to the Dungan insurrection, which laid waste Ordos two years before our visit. The settled Chinese population on the southern shore of the Hoang-ho, west of the meridian of Munni-ula, was insignificant, however, even before that time on account of the narrowness of this part of the valley, and also because of the poverty of the soil, which is saline and thickly covered with shrubs of willow or tamarisk. Here we saw *wild cattle*—a very remarkable thing; about which we had previously heard from the Mongols, who accounted for their existence in the following way:

Before the Dungan disturbances, the Mongols of Ordos kept large herds, and it sometimes happened that bulls or cows would stray, wander away in the steppe, and become so wild that it was exceedingly difficult to capture them. These cattle which had run wild were scattered over different parts of Ordos. When the Dungans broke into this country from the south-west and began destroying everything they met in their progress, many of the inhabitants, panic-stricken, left all their goods and chattels behind them and fled, only thinking of their own safety. The herds left unguarded

soon became so wild that even the robbers could not capture them for their own use. After the departure of the Dungans the wild animals remained at liberty, and they now chiefly frequent the bushes in the valley of the Hoang-ho, where there is abundance of water and good pasturage for them.

Wild cattle are generally met in small herds of five to fifteen, only the old bulls going single. It is strange how soon they return to all their wild habits notwithstanding their long domestication. The cows lie in the thickets all day, apparently hiding from man, but at twilight they come out to graze. On seeing or scenting a man, bulls and cows take to flight and never stop till they have gone a long way. The wildest and most intractable among them are, of course, the young ones, born and reared in a state of nature.

The chase of wild cattle is so difficult that during the whole of our stay at Ordos we only shot four bulls. The Mongols never take part in this chase, owing to their fear of entering Ordos, and also because these powerful animals do not feel the wound inflicted by the shot from an old flint-and-steel musket, which usually consists of a piece of cast-iron or a stone covered with lead. By beating the bushes, especially in winter, great numbers of these animals might be slain; the Mongols reckon their numbers in Ordos to be upwards of 2,000 head. Doubtless these cattle will all be exterminated in the course of time, or recaptured by the same Mongols who are now returning to Ordos. It might be otherwise

were there the same extent or luxuriance of grass plains (prairies) here that there is in South America, where a few stray individuals have been known to multiply into enormous herds.

The Mongols said that soon after the devastation of Ordos, wild sheep also appeared in these steppes, but they have all been destroyed by wolves. A few camels still wander about, one of which we succeeded in capturing, but it was a young one.

The first spot where we saw the wild cattle was twenty miles west of the temple of Shara-tsu. Our supply of meat being exhausted, we determined to take advantage of so favourable an opportunity to replenish it. We were, however, unsuccessful at first, entirely owing to our misplaced confidence in the stupidity of cows; at length, on the third day, early in the morning, I crept up to two bulls which were fighting among the bushes, and brought them both down with a right and left shot from my short rifle.

This success was most welcome to us, as we were now able to dry a supply of meat for the road. We dragged the best part of the slain animals to our tent, and cut up the meat into thin slices to be dried in the sun. This bait attracted numbers of kites, and we were obliged, gun in hand, to mount guard over the suspended pieces of meat. Eagles (*Haliætos Macei*) also appeared and paid the penalty of their temerity by enriching our collections.

While the meat was drying we fished in a desic-

cated arm of the Hoang-ho, near our camp. Some holes in the river-bed held water, and were full of fish, so that with our small net we caught in a short time upwards of 100 lbs. of carp and *silurus*; the latter of these is very common in the Hoang-ho. We kept the best of the fish we caught, and returned the remainder to the water.

The sport with the wild oxen and jerking the meat detained us eight days. But we had now enough to last a long while, and could advance more quickly; the more so as the poor vegetation and fauna of the valley of the river no longer presented objects of any particular interest.

On August 31st we resumed our march. The sands of Kuzupchi were on our left, as before, and on the right of our road lay the course of the Hoang-ho. Thick underwood impeded our progress in places, and the number of mosquitoes and small flies tormented us as well as our camels. The latter have a particular dislike to these insects, which are nowhere to be found in the deserts of the Mongolian plateau.

At the end of the first day's march we passed the night near the ferry of Gurbunduti,[1] not far from which, on the border of the sands of Kuzupchi, lies a small salt basin of the same name. We ourselves did not see it, but we heard from the Mongols that it was 2½ miles in circumference. The layer of salt deposited is six inches to two feet

[1] Between the towns of Bautu and Ding-hu there are three ferries across the Hoang-ho : Dju-jing-fu, Gurbunduti, and Manting.

in thickness. Chinese and Mongol labourers are hired to dig it out; when it is loaded into boats which descend the Hoang-ho.

Another remarkable object which we had seen a few days ago was the remains of an ancient town, dating from the time of Chinghiz-Khan. These historical ruins are situated amidst the sands of Kuzupchi, twenty miles from the bank of the River, whence they can be seen very well. According to the Mongols, this was a fortified and large city. Each side of its quadrangular walls measured 15 li (about 5 miles), with a height and thickness of some 50 feet. The wells inside are 350 feet deep. The whole is now covered with sand-drift, nothing but the walls remaining. We heard no legends about the place; all the Mongols could tell us was that it was built by the orders of Chinghiz-Khan.

The summer heats, which about the middle of August had diminished, were renewed with their former intensity in the latter part of that month, and were terribly exhausting to us on the march. Although we always rose with the dawn, the packing of our things and loading the camels, together with tea-drinking, without which neither Cossack nor Mongol will begin a march for anything in the world, occupied more than two hours, and by the time we had started the sun was already high above the horizon. At such times a perfectly clear sky and breathless atmosphere often prepared us for the unwelcome advent of a hot day.

The order of our caravan was always the same.

My companion and I rode ahead of the caravan, surveying, collecting plants, or shooting any birds we might see; then followed the pack-camels, attached to one another by the halter, and guided by the Cossacks, one of whom rode in front holding the end of the halter of the first camel, while the other Cossack, with the Mongol guide, when there was one, brought up the rear.

Thus we would travel for two or three hours in the cool of the morning. By this time the sun was high in the heavens, and began to scorch us mercilessly. The baked soil of the desert smoked with heat, like a brick stove. Marching became very difficult; the head ached and swam, perspiration poured from the face and whole body, and a feeling of weakness and lassitude supervened. The sufferings of the animals were not less than those of the men. The camels toiled along with open mouth covered with sweat, which stood like drops of water on their coats; even our untiring Faust followed at foot-pace with head drooping and tail between his legs. The Cossacks, who generally sang songs, were now silent, and the whole caravan moved noiselessly onwards at measured pace, as though each person were afraid to communicate to his neighbour the heavy thoughts which oppressed his brain.

If by some good fortune a Mongol yurta or a Chinese house stood by the roadside, we hurried along at the top of our speed, to moisten our heads and caps, drink some water, and give a little to the

horses and the dog—the heated camels must not have any. But the refreshing effect of this was not lasting; in half an hour, or less, everything became as dry as before, and again we endured the scorching heat.

It is near midday, and soon time to halt. How far is it to the water? is the question we put to the first Mongol we meet on the road, and we learn to our sorrow that nearly four miles more remain before we can reach it. At length, having arrived at the well and selected our camping ground, we make the camels lie down,[1] and take their packs off. The disciplined animals know directly what is coming, and lie down of their own accord. Then the tent is pitched, and all the necessary articles dragged into it and laid along the sides; in the centre is laid a piece of felting which supplies us with a bed. Then we have to collect the argols, and boil the brick tea, which is our ordinary drink winter and summer, especially whenever the water is bad. After tea, while waiting for dinner, I and my companion press the plants we have collected on the road, skin the birds and dress them for preserving, or seize a favourable minute for transferring to the map the survey of the day. This work in the inhabited country was frequently interrupted by the arrival of Mongols from the neighbouring yurtas: these visitors would annoy us with all kinds of tire-

[1] In summer camels cannot be watered or pastured directly after unloading them, but they must be kept two hours quiet to give them time to get cool.

some questions or requests; till at length we would have literally to turn them out of the tent.

In the meanwhile the cravings of hunger remind one that it is time to dine; but we must wait till the soup made from hares or partridges killed on the road is ready, or the mutton bought from the Mongols cooked. The latter, however, we rarely ate, owing to the difficulty of buying sheep, or the necessity for paying double their value; hence we mainly depended on our guns for a supply of fresh meat.

Two hours after arriving at the halting-place dinner is ready, and we fall to with wolfish appetites. Our plates and dishes, knives and forks, are of the simplest, and harmonise well with the other surroundings: the lid of the saucepan in which the soup is boiled serves for a dish, the wooden cups out of which we drink tea are our plates, and our fingers the forks; table-cloths and napkins are dispensed with. Dinner is soon over—we again drink brick tea; then we start off on some excursion, or after game, while our Cossacks and Mongol guide take it in turn to pasture the camels.

Evening approaches; the dying embers of the fire are rekindled, and we boil our porridge and tea. The horses and camels are driven to the tent; the former are tethered, and the latter, besides being tethered, are made to lie down near our baggage, or at a short distance to one side. Night descends—the heat of the day is succeeded by the agreeable coolness of the evening. We inhale a fresher air,

and, wearied with the fatigues of the day, we enjoy the rest of tired warriors. At one of the halts on the shore of the Hoang-ho, my companion's horse broke loose, fell down the steep river bank and was drowned. This was a serious loss, as we could not buy another horse anywhere, and M. Pyltself was obliged to ride a camel. The author of this misfortune proved to be Djuldjig, who had charge of the animals, and instead of minding his business went to sleep in the bushes. This half-bred Mongol caused us a good deal of unpleasantness from first to last. We hired his services in the mountains of Munniula, at the rate of five lans (about 25 shillings) a month, with food found; at first he behaved respectably, but no sooner had we crossed into Ordos than Djuldjig became worse than useless. To say nothing of his incorrigible laziness, and disinclination to do any extra work, such as bringing water, collecting argols, and tending camels, &c., he was constantly quarrelling with the Cossacks, and was even saucy to my companion and myself. After a salutary chastisement for his insolence, Djuldjig began to amend his ways, although he continued to be disgracefully idle. We at length got rid of him on arrival at the town of Ding-hu.

Eighty-three miles above this town the sands of Kuzupchi cross to the opposite bank of the Hoang-ho, and its valley (on the eastward side) becomes quite barren. The steep ridge of sand which borders the valley up to this point is now replaced by sandy slopes, which gradually rise till opposite

the town of Ding-hu they culminate in a lofty rocky ridge called the Arbus-ula. This range runs almost parallel with the Hoang-ho, continually approaching it till at length it closes in upon the very bank of the river at a place opposite to which on the other side of the Yellow River rises the great range of the Ala-shan mountains. According to a Mongol tradition, one of the rocky peaks of the Arbus-ula, which has the shape of a table, served as a forge for Chinghiz-Khan's smithy. His blacksmith is represented to be a man of such gigantic stature, that although seated on the ground he was much higher than the hill, and forged different arms and accoutrements on it for the great warrior.[1]

On the 14th of September we arrived at the town of Ding-hu, situated on the western bank of the Hoang-ho, to which we were obliged to cross in order to continue our journey in Ala-shan. Our adventures at Ding-hu were even more unpleasant than those at Bautu.

While we were still a few miles from the town the Chinese noticed our caravan, and climbed on to the town wall in crowds to get a better view of us in the distance. Hardly had we arrived opposite to the town, than a boat with twenty-five soldiers put off from it, and these as soon as they had landed on our side demanded our passports.

Our tent was pitched on the bank of the

[1] Chinghiz himself was represented in traditions which found their way even to Europe as a blacksmith. This seems to have originated in a connection (whether real or imaginary) between his name *Temujin*, and the Turkish *Temurji*, an 'iron-smith.'—Y.

Hoang-ho exactly opposite the town, and I sent the Mongol Djuldjig over with the soldiers to take my passport to the Chinese commander. Half-an-hour later, the Mongol returned in company with an official, who informed us that the mandarin desired to see us and asked to be shown our gun and dog, about which he had probably heard from Djuldjig. As soon as I had changed my dress, I stepped into the boat, taking with me the Buriat Cossack and the Mongol; the latter to act as interpreter of the Chinese language, with which he was well acquainted.

Hardly had we reached the opposite shore than a great crowd collected round us of all the inhabitants of Ding-hu. This small town had been entirely destroyed by the Dungans; the only thing left standing was a mud wall with a circuit of less than half a mile, and so rotten that a good blow with a stout oaken stick would almost suffice to make a breach in any part of it. The only inhabitants of Ding-hu are the garrison, numbering at one time a thousand men, but now, owing to desertions, reduced by one half.

Accompanied by the whole crowd, we passed inside the wall, where we were met by some officers who motioned to us to enter a house, where we were told to wait till we could be ushered into the presence of the mandarin commanding the garrison. The house which we now entered served as a lodging for one of the officers, but outside and in it was hardly better than an ordinary shed. By way of ornament long strings of garlic hung round the walls, which

gave out an aroma quite in keeping with the other domestic arrangements.

After an interval of ten minutes the mandarin sent to say that he would receive us, and we accordingly proceeded to his house. He sat at a table in a yellow robe, and asked, with a consequential air, who I was, and what was my object in visiting the country? To this I answered, that I travelled for amusement, collecting herbs for medicinal purposes and shooting birds as specimens to show to my people at home; that I had also goods to sell to the Mongols; and, lastly, that both my companion and I were officials as stated in our passports. 'But your passport is evidently a forgery because the seal and signature are unknown to me,' interrupted the mandarin, maintaining his pompous attitude. I replied that I hardly knew more than a few dozen words of Chinese, and therefore could not write a passport for myself, and that I was unacquainted with any Chinese who could manufacture such articles. 'What goods have you?' continued the official. 'Mostly Peking ware for the common Mongols; we have already sold all our Russian articles,' was my reply. 'But you have some guns?' 'Yes, but not for sale,' I answered, 'because we are forbidden by treaty to trade in such articles in China. Our guns and revolvers are for protection against robbers.' 'Show me them, and let me see you fire at a mark.' 'Very well,' I rejoined; 'let us go outside.' I had my double-barrelled Lancaster rifle, and the Cossack carried a

small-shot gun; with the latter I killed a swallow on the wing, and with the former smashed a brick placed as a mark. After observing these results, the Chinese commander tried himself, but shot wide of the mark.

In the meanwhile they brought some old English military guns and double-barrelled pistols to show us. The mandarin loaded a gun, but could not hit a mark at twenty paces; then he fired a few more shots, and about the fifth shot broke the brick. Gratified with his success, he re-entered the house; whilst we were taken to the lodging of an officer, who entertained us with water-melon, tea, and a kind of soup.

Half-an-hour afterwards we were again conducted to the Chinese Commander-in-chief. 'I must look at your things and make a list of them,' said he. 'Tell me how many, and what guns you have.' To this I assented, and a clerk wrote down at my dictation a detailed description of our rifles, smooth bores, revolvers, gunpowder, balls, &c. &c. It had now become dark, and a tallow candle and sesamum-oil lamp were lighted in the mandarin's house.

The audience, however, did not last much longer. The mandarin only asked us to sell him a rifle, and on being refused, ordered his men to ferry us back across the Hoang-ho. On returning to our tent, we were greatly delighted to find Faust, who had accompanied us from camp, but had been lost in the town; it appeared that, tired with waiting and frightened at the noise made by the crowd, he swam

back again across the river in sight of my companion.

The following morning an official made his appearance accompanied by ten soldiers in full-dress red blouses, and announced that he had been sent to examine our things. The inspection began, but

MONGOL SOLDIER.
(From a Photograph lent by Baron Osten Sacken.)

was so carelessly conducted that the surveying work, which I had concealed at the bottom of one of my boxes, safely escaped the ordeal. One circumstance certainly favoured us, and that was the preparation of our soup, out of which the soldiers kept continually stealing bits of meat to eat, an occupation

which interested them a good deal more than examining the things.

After concluding the inspection, the official announced that his superior wished to look at the rifle and revolver we had practised with the day before. At first I declined to give up these articles, but upon his declaring he had orders not to return without them, I surrendered them on condition that a boat should be sent to take us across the river. After an hour the boat appeared, into which we placed all our baggage and crossed the river, leaving my companion and a Cossack in charge of the camels, for which the boat was to be sent a second time.

After storing all our baggage in the yard of a house standing on the bank of the River and used as a warehouse for salt, I applied to the mandarin for an order to have our camels brought over and for a pass to enable us to pursue our journey through Ala-shan. To this he replied, that he must personally inspect our things, and accompanied me to the place where they were stored. Turning them over he selected and gave to his servant whatever pleased him most, on the plea of wishing to examine them more carefully at home and promising to return them to me afterwards. He took two single-barrelled rifled pistols, a revolver in case, a dagger, two powder-flasks, a lamp, and a quire of writing paper. When I perceived that the examination was nothing less than robbery, I told my interpreter to inform him that we had not come

there to be robbed; upon this the Chinese general contented himself with what he had taken and abstained from any further inspection.

In the meanwhile the camels had not been brought across the River, the excuse being that the wind was too high and would endanger their being drowned. At last, after renewed remonstrances, the mandarin gave orders to ferry them over; but as they could not be placed on the boat owing to its high sides, ropes were tied to their heads, and in this way they were towed through the river, which is 1,400 feet wide, and has a rapid current. This bath certainly did not improve them, as these creatures have a strong aversion to water.

As soon as the camels had been brought over, I asked for my passport, but was told that the mandarin was asleep and that I might wait till next day. Out of all patience at this delay, I sent a messenger to say that if my passport were not returned we would go without it, but should prefer our complaints at Peking at such treatment.

I do not know in what words the message was delivered to the mandarin; but a quarter of an hour later an official appeared, escorted by ten soldiers, with orders from the mandarin to write another list of all our articles, and not to suffer us to depart without a passport. This time they only wrote down the number of our boxes, leathern trunks, and bags; the soldiers remained under the pretence of preserving these articles from the thieves, but really to guard us.

Our situation was most embarrassing; we were surrounded by a crowd of impudent soldiers, who took all sorts of liberties with us; and to add to our difficulties, one of our Cossacks was taken ill and was unable to move. Towards evening it began to rain; but we could not find shelter anywhere and were obliged to pass the night under the open sky, there being no room to pitch our tent in the narrow yard, already inconveniently crowded with our ten camels. We therefore submitted to circumstances, and after clearing a small space we lay down on some felting. Fortunately the rain soon ceased and the night was clear; the soldiers took it in turns to keep watch at the gates of the yard.

The next day we waited till midday, and were told that the mandarin was still asleep. I wished to satisfy myself on this point, but the soldiers would not let me pass into the town. In the meanwhile the mandarin kept sending envoys asking me to present him with all the articles he had taken from me, my Lancaster rifle among the number. I peremptorily declined, saying that I was not rich enough to give every Chinese general I saw, a gun which cost several hundred rubles.

In the afternoon they sent to tell me that the general had risen, and they brought the box with the rifle, but the powder-flask and box of caps were gone. 'Your commander has stolen two articles from this case,' I remarked to the official who brought it, and I sent my interpreter to explain this. I did

not wish to go to him any more myself, as I considered it beneath my dignity to have any dealings with such a rogue. In an hour's time the Cossack returned, bringing the powder-flask empty, but informing me that the mandarin would not surrender the caps, which he wished to keep for himself. The Cossack also told me that he had repeatedly asked him to persuade me to give him the other things. The servant who accompanied the Cossack waited for an answer; and was sent back to the mandarin with another refusal. He soon returned, however, and explained that the mandarin wished to buy the articles which had been taken. At first I thought of refusing to sell them, but afterwards, acting on the advice of a Mongol *zanghin*,[1] with whom we were on good terms, consented to the arrangement, on condition that a passport and guide should be at once given us. Both one and the other were soon supplied; but instead of sixty-seven lans (about 17*l.*), which was the price fixed on for the articles, the mandarin only sent fifty lans (12*l.* 10*s.*), informing me that he would pay me the remainder of the money at my next visit. I was reluctant to re-open negotiations for such a trifle, and giving orders to pack the camels notwithstanding the approach of evening, we started from Ding-hu.

The Mongol zanghin joined us on the road, and related how on hearing that I wished to go without his leave, the mandarin had exclaimed angrily, 'I

[1] A subaltern officer of the rank of cornet. Timkowski's 'Travels,' i. 11.

'will cut off his head,' and ordered us to be put under a guard. Such is the civility shown to Europeans in China, where the only name applied to us is that of '*foreign devils!*'

CHAPTER VI.

ALA-SHAN.

The Eleuths—Extent and character of Ala-shan—Sandy tracts of Ala-shan—Flour of the Sulhir grass—Flora and Fauna of Ala-shan—Birds of Ala-shan—Population of Ala-shan—Mongols of Ala-shan — Lake Tsagan-nor — Route to Din-yuan-ing — Arrival there—Din-yuan-ing and the Prince—The Prince of Ala-shan and his family — The Gigen — Lama Baldin-Sordji — Curiosity of the people—Intercourse with the younger Princes—Questions about Europe—Openings for trade—Stories about the Dalai Lama—'Shambaling,' the Promised Land—The Promised Land of 'Shambaling'—State visit to the Prince—Interview with Prince of Ala-shan—Views of the Anglo-French war—We proceed to the mountains—Mountains of Ala-shan—Birds of Ala-shan mountains—Birds and Mammals of Ala-shan—The kuku-yamans or mountain sheep—Shooting them in the mountains—A frightened herd—Desperate leap—Return to Din-yuan-ing—Obliged to retrace our steps.

THE southern part of the high plateau of the Gobi, to the west of the middle course of the Hoang-ho, is a wild and barren desert, inhabited by Oliut (Eleuth) Mongols,[1] and known by the name of Ala-

[1] The Oliut, Eleuth, or Öloth Mongols are sometimes alleged to have derived their name from Oliutai, one of the princes of the Yuen or Chinghizid dynasty after its expulsion from China, and this would be quite consistent with Tartar practice (e.g. the *Chagatais* and the *Uzbeks*). But a more probable signification seems to be 'the Separated.' The title has been applied for some centuries to the western hordes, extending from the sources of the Selenga and the Orkhon, to the Thian-Shan and the Upper Irtish. They were divided into four great bodies or clans, Dzungar, Turgut, Khoshod, and Turbet (whence also called *Durban-oirad* or the Four Allies); and connected with them are also those further west, known to the Mahommedans as Kal-

shan or Trans-Ordos.[1] This region is covered with bare sand-drift, extending on the west to the River Etsina,[2] on the south to the lofty mountains of the province of Kan-su, and on the north disappearing altogether in the unfruitful clay flats of the central Gobi desert. These are the natural as well as the political boundaries of Ala-shan, which is bordered by the Khalka[3] and Urute countries on the north, and by the province of Kan-su and a small part of Ordos on the other sides.

Topographically Ala-shan is a perfectly level plain, which, like Ordos, in all probability once formed the bed of a huge lake or inland sea. This fact is evidenced by the level area of the whole region, its hard saline clay and sand-covered soil, and lastly the salt lakes, which are formed in the lowest parts

maks. The Turgut branch of the Eleuths, early in the eighteenth century, carried their conquests and migrations westward to the Volga; and it was this horde which in 1771 made that extraordinary re-migration in mass to the Chinese territory of which T. de Quincey has given such an extraordinary description. The Eleuths of Ala-shan were, according to Timkowski, settled there by the emperor Kang-hi in 1686, having been driven from their own seats by Galdan Khan, of Dzungaria.—Y.

[1] *Trans-Ordos* is, I presume, a name given by the traveller himself, but it is a very inconvenient style of nomenclature. The *trans* in this case is not even from the Russian, but from the Peking standpoint.—Y.

[2] The *Etsina* river runs northward into the desert from the vicinity of Kanchau, and on its banks no doubt stood the city of *Etzina*, 'on the verge of the Sandy Desert,' of which Marco Polo makes mention in the route to Kara-Korum.—Y.

[3] The *Khalkas* form another and the most important of the modern great divisions of the Mongol tribes. The name was given apparently in the latter days of the Ming dynasty (*circa* 1600), to the tribes on the north of the Gobi, then independent of China; and those bearing it extend over 30 degrees of longitude, from the Manchu country westward to the Ili.—Y.

where the last remnant of its ancient waters are collected.

The desert of Ala-shan for many dozens, aye, hundreds of miles presents nothing but naked sands, ever ready to overpower the traveller with their burning heat or smother him beneath their sandstorms. Some of these sands are so extensive as to be called by the Mongols *Tingeri*, i.e. 'sky.' Not a drop of water is to be found in them; no birds, no animals are visible; and their deathlike solitude fills with involuntary dread the soul of the man who has wandered here.

The Kuzupchi or sandy tracts of Ordos appear small in comparison with those of Ala-shan. Amid the former oases may occasionally be seen covered with vegetation; whilst here no such spots relieve the boundless expanse of yellow sand, alternating with vast areas of saline clay, and nearer the mountains with bare shingle. Such vegetation as may be seen is of the poorest description, comprising only a few stunted bushes and some dozens of kinds of grasses. In both one and the other category the *saxaul*, called by the Mongols *zak* (*Haloxylon* sp.), and the grass *sulhir* (*Agriophyllum Gobicum*), are most prominent.

In Ala-shan the *saxaul* or *zak* has an arborescent growth of 10 to 12 feet in height, with a thickness of half-a-foot,[1] and is generally found on the bare sand. Its wood is too knotty and porous to be of any use in handicraft, but it makes excellent fuel, and

[1] Occasional trees may be seen, 18 feet high, with a stem a foot thick.

its leafless but juicy and prickly branches are the chief food of the camels of Ala-shan. The Mongols pitch their yurtas beneath the shelter of these trees, which protect them in some degree from the wintry blasts on the bleak steppe; it is said, too, that you can obtain water sooner by sinking wells in places where the zak grows than elsewhere.

The range of the zak is very limited in Ala-shan, being only found in the northern part of this country. In the Gobi, however, it grows sporadically on the sand as far as the 42nd parallel N. lat.[1]

The grass *sulhir* is of even greater importance to the inhabitants of Ala-shan than the zak, and may be called, without exaggeration, the 'gift of the desert.' It attains a height of two (rarely three) feet, growing on the bare sand, generally near the borders of sandy wastes devoid of vegetation. This prickly saline plant blossoms in August, and its small seeds, yielding an agreeable and nutritious food, ripen in the end of September. The crop of sulhir is best after a rainy summer; in a drought it withers, and then the Mongols of Ala-shan fare badly the whole year round.

To obtain the seeds of the sulhir the Mongols gather the grass and thrash it on the bare clay, patches of which often occur in the midst of the

[1] The zak also grows in Ordos and Tsaidam, and is distributed over the whole of Central Asia to Turkestan.

Mr. Macgahan describes the *saxaul* of Western Turkestan as 'a low, scraggy, gnarly bush, varying from a foot to six feet high. The wood is very hard and brittle, so that it is more easily broken than cut, and it is so hardy that it flourishes even in the bleakest and most desolate places.' (*Campaigning on the Oxus*, p. 45.)—Y.

sands. The seeds are first roasted over a slow fire, then pounded in a mortar, when they produce a very palatable flour which is boiled in tea. We tasted the sulhir flour in Ala-shan, and took a supply of it with us for the return journey. The sulhir also serves as excellent food for the domestic animals: horses, camels, and sheep are all very fond of it. This plant also grows in Ordos and the central Gobi on the bare sand, and we found it in Tsaidam. The other kinds of plants in Ala-shan are mostly the same as those we had seen in Ordos. On the clay the *budarhana*, the *karmyk* often forming hillocky mounds, the prickly convolvulus (*Convolvulus tragacanthoides*),[1] the field wormwood, and an occasional acacia are most common; among the grasses *Inula amophila*, *Sophora flavescens*, *Convolvulus Ammani*, *Peganum* sp., *Astragalus* sp., and others are met with. But the scanty, crooked, and stunted vegetation of the desert generally leaves an unfavourable impression. There is no energy in the life of this region, the stamp of apathy and decay is upon it; everything seems to grow unwillingly as if under compulsion, receiving only sufficient nourishment from the poor soil to prevent it from withering altogether.

The poverty of Ala-shan in flora is equalled by that of its fauna. None of the larger mammals except the *kara-sulta* inhabit the desert; wolves, foxes, hares, and hedgehogs (*Erinaceus auritus*?) are

[1] This low and very prickly shrub, which generally grows in clumps, is called by the Mongols, *Dzara*, i.e. hedgehog.

found. Of the smaller rodents there are two kinds of sand martens; one of them lives entirely among the bushes of zak, and honeycombs the earth with its burrows so that it is often quite impossible to ride over such spots on horseback. All day long you can hear the squeak of these little animals—a sound as dull and monotonous as everything else in Ala-shan.

Among birds the most remarkable is the *kolo-djoro* (*Podoces Hendersoni*), about the size of our starling, and resembling the hoopoe in its flight. This bird is in every respect the bird of the desert, and is only to be seen in its wildest parts. Wherever the soil becomes more productive the kolo-djoro disappears; hence this bird, like the kara-sulta, is always an unwelcome sight to the traveller. We found it in Kan-su, and then again in Tsaidam; its range northwards in the Gobi extends to 44½° N. lat.[1]

Of other birds in Ala-shan the most common are the *sandgrouse* (*Syrrhaptes paradoxus*), which visit this region in great flocks during winter, larks (*Alauda pispoletta*? *Otocoris albigula*, *Gabrita cristata*?), stonechats (*Saxicola deserti*) and among the zak bushes sparrows (*Passer* sp.). In summer small cranes (*Grus virgo*) also visit this country, where they feed on the innumerable lizards which appear in the desert. If there are no marshes in the vicinity, the cranes come to drink at the wells, and being unmolested by man become very tame.

[1] But this bird is met with in the far west, where it was discovered by Forsyth's expedition, in 1870, from Lahore to Yarkand.

These are nearly all the birds of the desert of Ala-shan. Migratory birds fly at a great height without stopping. At all events we only saw towards evening flocks of cranes sitting on the sand to pass the night in order to resume their flight early the next morning. Even magpies and crows are not seen in the plains of Ala-shan; and it is but now and then that a solitary kite sails along over the tent of the traveller, in the expectation of devouring the remnants of his meal.

Of the class of reptiles, lizards (*Phrynocephalus* sp., in smaller numbers *Eremias* sp.) are innumerable. These lizards are almost the exclusive food of the cranes, buzzards, and kites; even gulls fly hither from the Hoang-ho to seek this prey; wolves, foxes, and Mongol dogs also feed on these reptiles for want of something better to eat.

The population of Ala-shan is composed of Oliut (Eleuth) Mongols, to which race some of the inhabitants of Koko-nor, the Turguts,[1] and our Kalmucks belong. The Mongols of Ala-shan are very different in external appearance from the Khalkas, and appear to be a mixed race between the latter and the Chinese. Under the influence of the Celestials they have undergone a considerable change in character, and are not even surpassed by their neighbours in opium-smoking. Chinese industry, however, is unknown here, and Mongol laziness is preserved in all its original ugliness. Such is the influence everywhere exercised by the Chinese over the

[1] *Vide* supra, p. 231.

Mongols, tending rather to degrade than to civilise them. Here we have another example of the degrading tendency of Chinese civilisation on the nomads. No more contemptible creature exists, in my opinion, on the face of this earth than a Mongol who has fallen under Chinese influence and has lost the fine qualities which distinguish his race, only adopting instead new, vicious habits most congenial to the idle side of the nomad character. This nondescript possesses neither the frankness of the Mongol nor the industry of the Chinese, although he sets himself above his former fellows.

The language of the Mongols of Ala-shan is in many respects different from that of the Khalkas, from which it is also distinguished by its softer accent and more rapid pronunciation.

The Mongols of Ala-shan are very poor. Their chief occupation is breeding camels, which are used to transport salt and different Chinese merchandise. Sheep, horses, and horned cattle are not numerous, owing to the absence of pasturage; goats are more abundant, and herds of yaks, belonging to the sovereign prince and his sons, graze in the mountains.

Ala-shan is divided into three banners, for administrative purposes; but the population is small. The inhabitants were still further reduced in numbers by the Dungans, who devastated Ala-shan simultaneously with Ordos.[1] The town of Din-

[1] According to information we received from the natives, the number of yurtas remaining in Ala-shan after the Dungan invasion was about one thousand. Taking the average of 5 to 6 per yurta, we should have 5 to 6 thousand inhabitants for the whole country.

yuan-ing (Wei-tching-pu) alone escaped this fate; it is the residence of the ruling prince, and lies to the west of the Ala-shan mountains.

To this place we proceeded after leaving Ding-hu. However, after one day's march we halted for three days at the yurta of our friend the Mongol zanghin. Of him we purchased a camel and exchanged two of our own which had sore backs; we were also obliged to halt to rest the sick Cossack who fortunately soon recovered. Our former guide, Djuldjig, was left behind at Ding-hu, and in his stead, with the assistance of the same zanghin, we hired another one, who, although a Mongol, was a Mahommedan and an excellent fellow. He accompanied us to Din-yuan-ing, which is 125 miles from Bautu. The road is a mere track almost obliterated in places, and one must know the country well not to lose oneself. We saw no inhabitants, but wells are dug at intervals of 16 or 20 miles, and postal yurtas are stationed near them.

On the second day's march we passed a small lake, *Tsagan-nor*, and close beside it a spring of pure cold water—a rare sight in these countries. Two large willows sheltered the spot, which the Mongols held sacred. We were greatly rejoiced at this discovery, not having tasted good water for more than a month, and therefore determined to halt.

The limpid streams from the well only flow for a few dozen paces, but the plot of ground which they water is bright green covered with such grass as can be found nowhere in the desert.

The immigration of birds which began in August increased in September, as many as eighteen kinds having made their appearance in the early part of this month. But the birds of passage mostly keep to the valley of the Hoang-ho, and only visit the desert of Ala-shan in small numbers. Here they fare badly, for many of them perish from hunger or thirst in the wilderness, and I found numbers of dead thrushes, which dissection proved to have evidently died from starvation. My companion once picked up in a dry ravine near the axis of the lofty Ala-shan mountains, a mallard so exhausted as to allow itself to be caught in the hand.

The summer heats were now over, and we could march without great fatigue. The loose sands, ranged in small mounds like those in Ordos, surrounded us with a boundless yellow plain which was lost in the horizon. The road led through bushes of zak, frequently crossing the ridges of sand. The fate of the traveller who loses himself in these trackless wastes would indeed be terrible, especially in summer, when the desert becomes as hot as an oven.

Fifty miles before arriving at Din-yuan-ing the bare sands recede to the right of the road, which now continues through a plain of clay and sand for the most part, covered with rare clumps of the field wormwood, called by the Mongols *sharaldja*, and used by them for fuel. This plain extends as far as the Ala-shan mountains, which rise like a huge rampart, and may be seen 60 miles off; snow lay on

some of the summits of the mountains at this season, although none of them attain the level of perpetual snow.

On September 26th we arrived at the town of Din-yuan-ing, and for the first time during the expedition received a hospitable welcome from its prince, by whose order three officials came to meet us, and led us to a house previously prepared for our use. I should mention, however, that while we were still a whole day's march from the town, three other officials met us, sent by the prince to know who we were. One of their first questions was, 'Were we missionaries?' and only after receiving an answer in the negative would they shake hands with us. They said that if we had been missionaries the prince would not have allowed us to enter the town. Indeed, one of the chief elements of our success was the resolution we formed not to trouble anyone with our religious opinions.

The town of Din-yuan-ing, as we have stated, is the place of residence of the ruling prince of Ala-shan. It is 10 miles from the central part of the Ala-shan mountains, and 53 miles to the north-west of the large Chinese town of Ning-hia-fu,[1] in the pro-

[1] The Mongols call this town *Irgai.* [This is an interesting fact, and shows (what I have questioned in 'Marco Polo,' 2nd ed., i. 273), that Klaproth was right in deducing from a statement of Rashiduddin, in his Persian History of the Mongols, that *Irghai* was identical with Ning-hia-fu, the capital of the king whose wife Chinghiz appropriated (*supra*, p. 203). There remains some difficulty in identifying *topographically* Ninghia with either the *Egrigaya* of Marco Polo (Book I. ch. lviii.), or his *Ergui-ul* (ch. lvii.), though we can hardly doubt that the *name* Irghai lies hid in one or other of these. And there seems little doubt that in the principality of Ala-shan we have substantially

vince of Kan-su. The Chinese call this town Wa-yang-pu, and the Mongols Alasha-yamen, i.e. place of government of Ala-shan.

Din-yuan-ing consists of a fortress with a mud wall a mile in circumference. At the time of our visit this wall was prepared to withstand a siege, and we could see stones and beams laid on the battlements in readiness for the enemy's attack. In front of the principal wall on the northern side three small mud forts were built surrounded with a palisade.

The prince himself lives within the fortress, where some Chinese shops and the barracks of the Mongol soldiery are situated. Outside the principal barrier several hundred houses formerly stood, but they were all destroyed by the Dungans, who were, however, unable to take the fortress. Everything outside the wall was destroyed, including the suburban palace of the prince, two-thirds of a mile from the town, standing in a small park. This park, which formerly contained ponds with water, looks like enchanted ground in comparison with the surrounding wilderness.

Such is the external appearance of the town of Din-yuan-ing. Let us now describe its inhabitants.

The most remarkable personage among them is of course the ruling prince, or, as he is called here, the 'Amban.'[1] He ranks in the second class of

Polo's district of Tangut called Egrigaya, of which the capital was called *Calachan*. This place is also mentioned by Rashiduddin as *Khalajân*, one of the cities of Tangut.—Y.]

[1] We could not ascertain the name of this prince because the Mongols consider it wrong to mention the names of their chiefs, and still worse to tell them to any stranger.

princes, and governs Ala-shan on the principles of mediæval feudalism. By origin a Mongol, this prince has become quite a Chinese, the more so on account of his family ties with the Imperial house, having received in marriage one of the princesses. A few years ago his wife died, and he now lives with concubines.

The prince himself is a man of forty, with a good-looking face, but rather pale, owing to his being addicted to smoking opium. In character he is corrupt and despotic to the last degree. The gratification of a whim, a sudden outburst of passion, or the desire for revenge, override the dictates of calm judgment and discretion; in fact his own sweet will replaces every law and is implicitly obeyed without the slightest opposition from anybody. But the same system prevails throughout the whole of Mongolia and China. Nothing but the ignorance of the masses could allow such a state of society to continue, which under other circumstances would inevitably lead to the dismemberment of the empire.

The prince of Ala-shan passes all his time in the seclusion of his house, smoking opium, and never appears in the streets; formerly he used occasionally to visit Peking, but the insurrection of the Dungans put an end to these journeys.

The Amban has three full-grown sons, the eldest of whom will be his heir; the second has entered the monastic order; and the youngest, by name *Siya*,[1] has no fixed profession.

[1] The name and title of this prince, as he wrote it himself in my

The Gigen is a handsome youth of twenty-one, with a bright impetuous disposition, quite spoilt, however, by his training: he cannot bear the slightest contradiction, and considers his opinion infallible. Owing to his want of intellect and culture he gets quite confused with all the silly stuff which the lamas are constantly talking to him, about his transmigration, miracles, and sanctity. Without troubling himself to reason for himself, the Gigen takes everything for granted in the most unconcerned way, and looks upon his profession as the source of great power, and of emolument arising from the offerings of zealous believers. Nevertheless his youthful spirit seeks for something better, and frets at the narrow routine of daily prayers, prophecies, and dispensation of blessings. To satisfy his craving for liberty the youth devotes himself to the chase, and for days together, accompanied by a posse of lamas, hunts the fox in the environs of the town. Subsequently he bought one of our guns and amused himself by shooting birds in his suburban garden. But his numerous devotees will not allow the poor Gigen to enjoy even this sport in peace. Once while on a shooting excursion with my companion he requested the latter to drive these suppliants away because they crowded round him and frightened the birds. Of course it is contrary to etiquette for a Buddhist saint to go a hunting, but the lamas

note-book, was *Olos-on Tushige-gun-dzyrgeh Nehmensen Balchinbandzarguchan.* The title and name of the Gigen: *Alasha-ing Tsinwang koshung. uyon Sayeng Batargulokchi sumeh Nomon khan djamtsuwandjil.*

of his suite dare not hint at such a thing to their master, who keeps them under strict discipline. In consequence of the Dungan insurrection the Gigen organised a force of lamas 200 strong, armed with English smooth-bore guns sent from Peking, to beat off the marauders, who still make frequent raids into Ala-shan.

The youngest son of the prince of Ala-shan—Siya, bears some resemblance in character to the Gigen, and is a decidedly wild youth. He himself told us that he hated books and science, but liked war, sport, and riding horses. He is certainly an excellent rider; on the occasion of a foxhunt which the two brothers arranged for us he distanced all his companions in the chase.

The eldest son we only saw once, and therefore I have nothing to say about him. His intimate friends described this prince to be unlike his brothers in character, but rather reserved in manner and dignified, as a future ruler should be.

Besides these personages we must mention a lama named Baldin-Sordji, who is a confidential adviser of the prince and his sons. This very Sordji in early life ran away to Tibet, in the company of a caravan of pilgrims; after passing eight years at Lhassa he learned the Buddhist mysteries and returned to Ala-shan a lama. Cunning and sagacious by nature, Sordji soon gained the confidence of the Amban, and was promoted to a high office. By command of the prince, he travels every year to Peking to make different purchases; he has even

visited Kiakhta, where he became acquainted with the Russians.

Sordji was very useful to us, owing to his willingness to serve us and the important position he held in the town. Without him we might not have been so well received by the prince and his sons. He was one of the three persons sent out to meet us and to enquire who we were, and he explained to the prince of Ala-shan that we really were Russians and no other kind of foreigners. *Russian*, however, is the generic name applied to all Europeans by the Mongols, with the affix *French* or *English* according as they wish to designate either Frenchmen or Englishmen; the nomads believe that the two last-named nations are vassals of the Tsagan-Khan, i.e. White Tsar.

On entering Din-yuan-ing we were met outside the town by an immense crowd of people who followed us and filled every corner of the courtyard in the Chinese inn where we were located. The landlord of this inn was evidently displeased at our lodging with him, and he was a long time in finding the key of the house assigned for our use. At last the key was found; we unloaded the camels, carried everything into the house, and soon after our meal lay down to sleep, as it was late, and we were very tired with our long march. The following day from the early morning our rest was disturbed by the inquisitive rascals, who invaded the yard, climbed on to our house, and tore slits in the paper windows through which to look at us. Our military guard

tried in vain to keep back the mob; no sooner had they driven out one set than ten minutes afterwards another collected; this continued all day during the whole of our stay at Din-yuan-ing, especially during the earlier part of the time. We could do nothing, for no sooner did we show ourselves than we attracted general attention. It was provoking to have to sit with folded hands in a dirty house just at a time when the migration of birds was at its height, and with the great wooded mountains of Ala-shan near us. But the traveller, more than anyone, must submit to circumstances, and we accordingly resigned ourselves.

Two days after our arrival at the town of Ala-shan we had an interview with the two younger sons of the prince, the Gigen and Siya, five days later with the eldest brother, and not till the eighth day with the Amban himself. We had to give presents to all of them, in accordance with the intimation we had received beforehand from the three officials who met us on our arrival. Having nothing with me specially adapted for the purpose, I gave to the prince a watch and aneroid unfit for use; to his eldest son a binocular glass, and to the Gigen and Siya sundry small articles, such as hunting accoutrements and gunpowder. In return for these, we received from the prince and his sons some valuable presents: a pair of horses, a bag of rhubarb, and a loaf of Russian sugar, imported into Ala-shan by way of Kiakhta. Besides which our friends the Gigen and Siya gave me a silver bracelet, and a

gold ring to my companion, as keepsakes. Altogether the Amban and his sons, especially the two younger, were very well disposed towards us, and were constantly giving us proofs of their goodwill. Every day they sent us baskets of watermelons, apples and pears, from their garden, which were the more appreciated after our long privations in the desert; the old prince once sent us a dinner composed of numerous Chinese dishes of different kinds. The Gigen and Siya accompanied us on several shooting excursions, and we often passed the evening with them, sometimes chatting till late at night. Although it was difficult to keep up a conversation through the medium of an interpreter, we managed to pass our time pleasantly, and enjoyed it the more because we escaped for a time, at all events, the restraint imposed on us at our own house. The young princes appeared quite at their ease in our society, laughed and joked, and sometimes even played games or performed gymnastic exercises. In the course of conversation Siya asked many questions about Europe, and the life there; its people, machinery, railroads, telegraphs, &c. &c. The accounts we gave seemed fabulous to them, and excited their desire to see with their own eyes all the wonders we described; they entreated to be allowed to return with us to Russia. Sometimes they showed us different European articles bought at Peking and Kiakhta, such as revolvers, swordsticks, musical boxes, watches, and even bottles of eau-de-Cologne.

In the meanwhile our proposed interview with the old prince was postponed on various pretexts, and before that event had taken place we could not proceed to the mountains. The Lama Sordji and other officials visited us every day, and we sold them all our Peking ware at a profit of thirty or forty per cent. The Russian articles (needles, soap, pocket-knives, beads, snuff-boxes, looking glasses) realised a far higher profit; we certainly had not many of them, but the few dozen rubles' worth remaining of our stock of these goods realised 700 per cent. more than their cost price. Of course this is an exceptional case, but I think that if a regular trade were established, not only here but throughout Mongolia, it might become very profitable. Of course some knowledge and experience are requisite to ascertain what kinds of goods are in greatest demand. I think the most important articles of export from Russia would be woollen stuffs, cloth, and Russia leather, which are even now exported to China in considerable quantities. But perhaps the demand for hardware, such as scissors, knives, razors, copper vessels, iron saucepans, &c. would be even greater. All these articles are indispensable for the domestic life of the nomads, who now receive them, but of very inferior quality, from China. Another article of export might be yellow and red silk stuffs, such as are worn by the lamas; also coral, which is highly prized in Mongolia, brocade, red beads, needles, watches, snuff-boxes, looking-glasses, stereoscopes, pencils, and other small articles. One of

our most constant visitors was the Lama Sordji, who came several times a day, and told us a great deal about Tibet. He related, amongst other things, that the pilgrims arriving at Lhassa were not allowed to see the Dalai Lama before having paid from three to five lans the first time, and one lan the second and every succeeding occasion of their seeing the incarnate deity. But this scale of charges refers only to the poorer people, who are provided with lodging and food at the cost of the sovereign of Tibet. The wealthier classes and the princes who come to make their devotions bring large and sometimes very rich presents to the Dalai Lama.

The present Dalai Lama is a boy of eighteen, and, as we heard the Buddhists relate, obtained his seat on the throne in the following manner. A short time before the death of his predecessor, a Tibetan woman came to pray at the temple. Hardly had the saint set eyes on her than he prophesied that she would become the mother of his successor. He then gave her bread and some kind of fruit, after partaking of which the woman conceived. Soon afterwards the Dalai Lama died, having named this woman as the mother of his successor. It is certain that the very moment the infant was born a miraculous stream of milk flowed from the post which supported the yurta, in proof of the holy calling and great sanctity of the new-born babe.

Another very interesting tale related by Sordji was the prophecy about Shambaling, the promised land of the Buddhists, to which at some future time

all the followers of this religion will migrate from Tibet.

This country is an island lying far away in the northern sea. Gold abounds in it; corn grows to an enormous height there. Poverty is unknown in that country; in fact, Shambaling flows with milk and honey. The migration of the Buddhists to this promised land should take place 2,500 years after the date of the prophecy; since that time 2,050 years have elapsed, and comparatively not many remain.

The mode of accomplishment of the prophecy will be as follows. In Western Tibet there lives a Gigen (living Buddha), who as the living incarnation of the Divinity never dies, but only passes from one body to another. Not long before the time appointed for the fulfilment of the prophecy, this saint will be born in the person of the son of the King of Shambaling. In the meanwhile the Dungans will have become more troublesome than ever, and will have laid waste the whole of Tibet. Then the people of the latter country, under the leadership of the Dalai Lama, will abandon their fatherland and set off for Shambaling, where they will be received and colonised on good lands by their saint, who will have succeeded his father on the throne.

Meanwhile the Dungans, emboldened by their successes in Tibet, will subjugate the whole of Asia, Europe, and lastly invade Shambaling. Then the holy monarch will assemble his forces, defeat the Dungans, and drive them back to their country, and

make the Buddhist faith supreme in all countries submitted to his rule.

This Gigen even now pays secret visits to Shambaling. For this purpose he has a wonderful horse, who is always saddled, and ready to take his rider in one night from Tibet to the promised land and back again. These journeys became known to the common people quite by accident.

The Gigen had a servant who one night wishing to visit his home clandestinely took his master's sacred steed. The miraculous animal sped like an arrow from the bow into the distance. After a few hours' ride trees began to appear, then lakes and rivers, which do not exist in the servant's country; at length the frightened rider turned his horse's head back. In doing this he broke off a branch of a tree to whip the horse in case he should tire; but this never happened, and towards dawn the servant again returned to the temple, wiped the horse down, and led him back to his stable.

Meanwhile the saint awoke, and at once knew what had occurred. Summoning his servant, he asked him whither he had ridden that night. Thus unexpectedly detected, the servant did not attempt to deny what he had done, but declared that he himself did not know where he had been. Then said the saint, 'Thou hast ridden nearly as far as the happy land of Shambaling, whither my horse knows the road, and no other. Show me the branch thou hast brought back with thee; behold, there are no such trees as this in Tibet, they grow not far from Shambaling.'

At the conclusion of his tale Sordji asked if I did not know where Shambaling was. In that country, added the lama, there is an enormous city wherein lives a queen, who since the death of her husband has ruled her people. I suggested England. 'Well, that must be Shambaling,' exclaimed the delighted Sordji, and begged me to show him the country on the map.

At last, on the eighth day of our stay at Din-yuan-ing, we received an invitation from the Amban to visit him. The lama Sordji first asked us, probably at the instigation of the prince himself, how we should salute their sovereign—according to our own custom, or in the Mongolian way, i.e. by falling on our knees. On being told that we should of course bow in the European fashion, Sordji begged us to prostrate ourselves before the Amban, or at all events that our Cossack interpreter should do so; but we peremptorily refused.

The visit took place at eight in the evening, in the reception chamber of the Amban. This apartment was very nicely furnished; it actually contained a large European mirror, purchased at Peking for 150 lans (about 37*l.*). Lighted stearine candles in plated candlesticks stood on the tables, on which was spread an entertainment, consisting of nuts, cakes, Russian sweetmeats with mottoes, apples, pears, &c.

When we entered and bowed to the prince, he invited us to sit down in the places prepared for us; the Cossack stood near the door. Besides the Amban, some rich Chinese merchant, as I afterwards

learned, was in the house. At the doors of the house, and in the entrance-hall, stood the aides-de-camp of the prince and his sons, who were also obliged to be present during our reception.

After the usual enquiries about our health and safe journey, the Amban said that no Russian had ever before visited Ala-shan; that he now for the

RUINS OF CHAPEL OF SISTERS OF MERCY AT TIENTSIN, DESTROYED BY CHINESE RIOTERS (from a Photograph by J. Thomson, Esq., F.R.G.S.).

first time saw these foreigners, and was very glad of our visit.

He then began asking us about Russia. What was our religion; how did we cultivate the soil;

how were stearine candles manufactured; how did people travel on railways; and how were likenesses taken by photography? 'Is it true,' asked the prince, 'that the liquid matter from human eyes is used in photography? It is reported,' continued he, 'that the missionaries at Tientsin put out the eyes of the children whom they had taken to educate for this purpose, which so enraged the people that they put all the missionaries to death.'[1] On my answering him in the negative, the prince begged me to bring him a machine for taking portraits, and I could hardly excuse myself by assuring him that the glasses would infallibly be broken on the road.

The prince then asked what tribute the French and English paid as vassals of Russia. When I answered the Amban that I had never heard of such a thing, he urged me to tell him whether the above-mentioned nations made war with China with our consent or of their own free will. 'In any case,' continued the prince, 'it was only the exceeding kindness of our Emperor that allowed these barbarians to depart from beneath the walls of his capital without being destroyed to a man; as a punishment for their savagery they had to pay a large contribution.'[2]

[1] At Tientsin, in July 1870, the common people rebelled, killed twenty Frenchmen and three Russians; the latter were accidentally among the number. The instigators of this tumult assured the people that the French Sisters of Mercy, who undertake the education of children, afterwards put out their eyes to obtain the liquid necessary for the preparation of photographic likenesses. This report circulated all through China, and was credulously believed.

[2] The opinion that during the last Anglo-French war with China the Europeans, and not the Chinese, were the vanquished, is universal throughout the whole of inner Asia, wherever we travelled. Certainly

All this time our friends, the sons of the prince, the Gigen and Siya, who were in the reception chamber, made signs to us on their fingers, laughed, and played all sorts of childish tricks whenever their father's attention was turned another way. The relations of the young princes to their father appeared to be of the most servile character; they were terribly afraid of him, and obeyed all his wishes unhesitatingly. The princes also kept up an espionage, and were not ashamed even in our presence to whisper to the lamas in attendance all kinds of tittle-tattle and gossip about their father and brother; towards their inferiors they behaved in the most despotic manner.

Our audience lasted about an hour. On taking leave the prince gave the Cossack interpreter twenty lans (5*l.*), and permitted us to hunt in the neighbouring mountains. Thither we proceeded the following day, pitching our tent at the summit of a pass near the axis of the main range. Our camels remained in the town, in the charge of Sordji and the Cossack, who was again taken ill more seriously than before; the chief cause of his malady was home-sickness. The prince sent us some guides and another lama, probably to act as a spy on our movements.

The mountains to which we now removed are,

to the Asiatic mind an enemy who appears beneath the walls of a hostile city and does not destroy it, is no victor, but rather the conquered party. The Chinese Government took advantage of this circumstance to spread the report among their faithful subjects of their victory over the Europeans. [Yet they can scarcely have suppressed the knowledge of the destruction of the emperor's summer-palace; and that just act of the English chiefs, which raised so unreasonable a clamour, finds in the circumstances here stated a new justification.—Y.]

as we have said, about ten miles from the town of Din-yuan-ing, and form the boundary between Ala-shan and the province of Kan-su. The whole range is known under the name of Ala-shán. It rises from the very shore of the Hoang-ho, opposite to where the Arbus-ula mountains in Ordos abut on the river, i.e. about fifty-five miles south of the town of Ding-hu. From this point the range we are describing extends, from north to south, along the left bank of the River, from which it gradually diverges. The total length of the whole range, according to the Mongols, is about 150 miles, but its width is very inconsiderable, and about the centre does not exceed seventeen miles. These mountains, however, rise abruptly from the valley, and are wild and alpine in character, especially on their eastern slopes, which are girt with enormous perpendicular cliffs, 700 to 800 feet in height, and seamed with deep valleys, in fact are marked with all the features of wild alpine scenery. No solitary peaks tower above the chief axis of the range, the highest points of which are *Bayan Tsumbur* and *Bugutui*, about its centre. The former of these mountains is 10,600 feet high, the latter about 1,000 feet higher. But between these two mountains the range subsides sufficiently to allow of a pass, the only one across it, by which the road leads to the large Chinese town of Ning-hia-fu.

Notwithstanding their height, the mountains of Ala-shan nowhere attain the limit of perpetual snow.[1]

[1] In September, when we saw the Ala-shan mountains for the first

Even on the highest summits the snow all melts in spring, although it sometimes falls in May and June, when it is raining on the neighbouring plains. The rain and snowfall on these mountains is very large, although running water is remarkably scanty; even springs are rare, and according to the Mongols only two running streams of any size occur in the whole range.[1] This phenomenon is attributable to the wall-like steepness of these mountains, which do not retain the moisture for sufficient time to allow of the formation of rivers. The torrents, which owe their short-lived existence to the heavy rains, descend headlong to the neighbouring desert, and are lost in the sands or form temporary lakes on the clay flats; but as soon as the rain ceases they disappear as suddenly as they were created.

The narrow, but at the same time lofty and rocky, chain of the Ala-shan mountains has been elevated by subterranean agency, and stands like a rampart in the midst of surrounding plains, exhibiting a peculiar formation, and forming quite a distinct group, as far as we could learn, unconnected with the ranges of the Upper Hoang-ho; it terminates in the sandy deserts in the south-eastern corner of Ala-shan. The chief rocks in these mountains are slates, limestone, felspar, felspathic porphyry, granu-

time, snow lay on some of the peaks on the northern side; from the end of that month snow, accompanied by rain, always fell in the upper and central zone of the mountains.

[1] Both these streams have their sources in Mount Bugutui. One of them, the Bugutui-gol, flows to the west, and the other, the Keshikteh-Murren, to the eastern slope of the mountains. On leaving the mountains both these streams are lost in the desert.

lite, gneiss, micaceous sandstone, and, the later volcanic formations; on the summit of Mount Bugutui the rocks are partly of quartzose conglomerate. Excellent coal-beds have been opened in the Ala-shan range.[1]

The borders of the mountains of Ala-shan nearest to the plains are only covered with grass and small rare underwood, but at a height of about 7,500 feet on the western slopes there are forests consisting of spruce interspersed with poplar and willow. On the eastern side the forests probably begin lower down, but the prevailing trees even here are small poplars, with a sprinkling of white birch, pine, and arborescent juniper. The thick underwood of these forests is chiefly composed of spiræa and hazel, and in the upper zone of prickly *Caragana jubata*, called by the Mongols 'camel's tail;' the highest parts of the mountains are covered with alpine pastures.[2]

Formerly a good number of Mongols lived in these mountains, and three temples were erected there, but these have been destroyed by the Dungans.

The ornithological fauna of the Ala-shan range, contrary to our expectations, was very poor, chiefly owing, in my opinion, to the want of water. On the occasion of our first visit the season was the middle of autumn, and a large number of birds had flown south, but in the summer of 1873 we found a similar scarcity of birds here.

[1] Before the Dungan ravages the coal was worked in small quantities by the Chinese.

[2] A more detailed description of the flora of the Ala-shan mountains will be given in Volume II. Chapter VIII.

The most remarkable of the native birds of the Ala-shan mountains is the long-eared pheasant (*Crossoptilon auritum*), called by the Mongols *kara-takia*, i.e. black hen. It belongs to a peculiar species, distinguished from other pheasants by a bunch of long feathers in the back of the head, like the ears of an owl; the kara-takia is much larger than the common pheasant, has strong legs, and a large roof-shaped tail, the four central feathers of which are long and pennated. The general colour of the plumage is leaden blue; the feathers of the tail are white near the root, turning to steel colour at the ends. The long ear feathers and throat are white; the bare skin on the cheeks and the legs red. The plumage of the hen bird is exactly similar to that of the male. The long-eared pheasants keep in small coveys in autumn, of about four to ten birds in each, in coniferous and deciduous forests. The Mongols said that formerly there were many more of these birds in the Ala-shan mountains; but in the snowy winter of 1869–70 a large number died from starvation and cold; however, the kara-takia are still sufficiently numerous.

We also saw the vulture (*Vultur monachus*), the lammergeier (*Gypaëtos barbatus*), the wall-creeper (*Tichodroma muraria*), the Siberian tit (*Pœcile cincta*), the nut-hatch (*Sitta villosa*), the greenfinch (*Hesperiphona speculigera*), *Pterorhinus Davidii*, jackdaws, and two kinds of partridges (*Perdix barbata* and *P. chukor*). Of migratory birds in the end of September we only saw the red-throated thrush (*Turdus rufi-*

collis), *Ruticilla erythrogastra*, *Accentor montanellus*, *Nemura cyanura*. The flight of birds of passage was nearly over by this time, the grass was withered, the leaves on the trees and bushes turned yellow or fallen off; snow fell instead of rain; frosts set in every night, and the depth of autumn had settled on the mountains.

The Mammalia are even less varied than the birds; but their want of variety is compensated for by their numbers, especially of the larger animals. During the whole of our stay in these mountains on both occasions we only found eight kinds of mammals, viz. the deer (*Cervus* sp.), chiefly inhabiting the pine forests on the western slopes, musk-deer (*Moschus moschiferus*), mountain sheep (*Ovis Burrhel*), called by the Mongols *kukuyaman*, i.e. blue goat, in great numbers on the eastern and more rocky side of the range. Among animals of prey are wolves, foxes, and polecats (*Mustela* sp.); among Rodentia a species of Lagomys and mouse (*Mus* sp.); and the Mongols assured us that in the northern unwooded parts of the range there are also argali.

Deer are plentiful in the Ala-shan mountains, where they are strictly preserved by order of the prince. They are nevertheless killed secretly, especially in summer, at the season of the growth of the young horns, so valuable in China. While we were in the mountains it was the rutting season of the deer, and the loud call-note of the males resounded in the forests day and night. I need

not dwell on the impression these sounds produced on my companion and myself. From early morning till late at night we climbed the mountains in pursuit of the wary animals, and at length shot an old buck, whose skin we prepared for our collection. Still more exciting was the chase after the mountain sheep inhabiting the Ala-shan range in great numbers, especially the wildest parts of the upper belt of the mountains. This animal is not much larger than the ordinary sheep. The colour of its wool is a tawny grey or tawny crimson; the upper part of the face, the chest, fore part of the legs, the line marking the division of the sides from the stomach, and the tip of the tail, black; the belly white, the hinder part of the legs yellowish white. The horns are large in proportion to their size, and curve upwards from the base with points twisted back. The ewes are smaller than the rams; the black marks on their bodies not so dark, and the horns small and almost upright.

The kuku-yamans live singly, in pairs, or in small herds of five to fifteen. As an exception they sometimes collect in large numbers, and my companion once saw a herd of a hundred. One or more of the males act as sentinels and protectors to the rest. On the approach of danger they at once give the alarm with a loud short whistle, so like a man's that at first I mistook it for the signal of a hunter.

A startled sheep rushes headlong up the rocks, which are often quite precipitous, and it is astonish-

ing to see the activity with which so large an animal climbs the most inaccessible places. The smallest ledge serves as a foothold for the kuku-yaman on which he can balance his body on his thick legs. Sometimes when a stone gives way under the weight of the animal, and rolls down the precipice with a loud noise, you expect the sheep to go down after it, but the next minute it leaps over the rocks as if nothing had happened. On seeing the hunter the kuku-yaman whistles two or three times, and after a few bounds stops to see whence the danger proceeds. He then offers a fair mark for the bullet; only you must not delay, otherwise, after remaining stationary a few seconds, he will continue his flight. When undisturbed the kuku-yaman generally moves at a footpace or slow canter, sometimes holding his head down.

The kuku-yaman is generally very wary and never allows anything suspicious to approach it. Its organs of scent, hearing, and sight are admirably developed; it is impossible to come within 200 paces of it downwind. Before evening it seeks its favourite alpine meadows to graze, and in the morning when the sun is high again returns to its native rocks. Here it will take up a position on some ledge and remain as motionless as a statue, now and then turning its head from side to side. I have seen the animal at such moments of repose on a shelving ledge of rock with its hind quarters reared above its head, and yet apparently perfectly at its ease. About mid-day these sheep generally rest on the ledges of

rock, in summer more often on the northern side, probably for the sake of coolness; here they will lie on their side, stretch out their legs like a dog, and doze.

The pairing season of these animals, according to the Mongols, is in November, and lasts about a month. At such times the call-note of the males is very similar to the bleating of goats, and may be heard day and night; at this season they fight furiously with one another. But they often fight at other times, and the ends of the horns of full-grown males are constantly broken owing to their pugnacious disposition. The young mountain sheep are born in May and remain with the mother till the next rutting season.

The chase after the kuku-yaman is exceedingly difficult, but some of the Ala-shan Mongols are expert hunters, and kill them with their match-locks. The inferiority of their guns is compensated for by a perfect knowledge of the country and habits of the animal. A full-grown ram yields about seventy-two pounds of meat; in autumn they are very fat and their flesh good to eat. The skins are sewn into bags and articles of clothing by the Mongols.

During our excursion in these mountains my friend and I passed days together in the chase. Ignorant of the locality, I provided myself with a Mongol hunter as a guide who was thoroughly acquainted with the mountains and the habits of the kuku-yamans. At early dawn we would leave

our tent and ascend to the summit of the mountain ridge by the time the sun showed itself above the horizon. On a clear still morning the panorama which lay beneath us on both sides of the mountains was enchanting. On the east glistened the riband-like stream of Hoang-ho, and the numerous lakes round the town of Ning-hia-fu sparkled like brilliants; on the west the sands of the desert faded from view in a broad yellow band dotted with verdant oases of clay-soil like islands in the sea of sand. The surrounding stillness was unbroken save by the occasional bleat of the deer calling his mate.

After a short rest we would make our way cautiously towards the nearest crags of the eastern slope of the mountains, where the mountain sheep are most abundant. On coming to the edge of a cliff my guide and I would stretch out our heads and peer down below. After carefully scanning all the ledges and clumps of bushes we would drag ourselves forward on hands and knees and then take another brief survey. This would be repeated at each cliff or rather at each precipitous bluff of rock. Often not satisfied with only looking we would listen attentively for the noise made by the footsteps of the animal or a loose stone detached from its place by his hoof. Now and then we ourselves would roll large stones down to the wooded ravines to startle our quarry from his covert. It was a fine sight to watch the downward flight of one of these pieces of rock. Barely clinging to the side of the cliff the mass yielded to a slight effort. Slowly

severing itself from the parent rock it would begin rolling gradually, but every second its impetus increased until at last the rock entered the ravine with the noise and speed of a thunderbolt, breaking great trees in its passage, and followed by a *débris* of smaller stones which poured into the ravine with a dull jarring noise. The valley re-echoed with the sound, startled animals and birds left their haunts, but in a few minutes all was still and quiet as before.

We passed many an hour in looking for mountain sheep, without, however, finding them. You must have the eye of a hawk to distinguish the grey skin of the kuku-yaman from the rocks which are of the same colour, or to detect the animal lying in the bushes. My guide had wonderful sight; he often saw the horns of the animal at a distance of several hundred paces, when I could not distinguish them with a field-glass.

Then we would begin stalking. For this purpose we had sometimes to make long circuits, descending almost sheer precipices, now jumping from rock to rock or across wide chasms, and now clinging to the ledges of cliffs; in fact, we were on the brink of danger at every step. Hands were often bleeding from cuts and scratches, boots and clothes torn, but all was soon forgotten in the hope of bagging the coveted animal. But, alas! how often these expectations were cruelly disappointed, when as we were stalking our quarry another kuku-yaman chanced to see us and gave warning to his mate, or a stone giving way under our feet warned

the wary animal of impending danger, and in a moment he was out of sight. How can I describe our disappointment! all our labour was spent in vain, and we had to recommence our work, i.e. look and listen for other kuku-yamans.

But then when everything went smoothly, and we were fortunate enough to get within 200 or 150 paces of the sheep, with what a beating heart would I lean my rifle on a projecting ledge and aim! In a moment the report of the discharge rolled through the ravines of the wild mountains, and the kuku-yaman, pierced with the shot, fell on a rock, or rolled down into the valley below, leaving a bloody trail behind it. Sometimes, if only wounded, the wild sheep would start off, then a second bullet from my rifle laid it low on the spot. This animal is, however, difficult to kill, and will often escape though mortally wounded.

As soon as we had descended to the slaughtered sheep we cut it up, the Mongol taking as his share the entrails, &c.; then tying the legs of the animal together, he would throw it over his shoulder, and we would start for camp heavily laden. When the droughts in spring parch up all the grass on the mountains, the kuku-yamans feed on the leaves of the trees, and will even spring on to the trees for this purpose. Of course this may be an exceptional case; but I myself, in May 1871, saw two of these animals on a wide-spreading elm fourteen feet from the ground, on a spur of the mountains bordering the left bank of the Hoang-ho.

The kuku-yamans are, as we have stated, active climbers, but they sometimes find themselves in an awkward position. Thus in the mountains round Lake Koko-nor I once surprised a herd of twelve on a gigantic cliff. How they got there I cannot to this day explain, because the rock was perfectly precipitous on three sides, and on the fourth covered with loose detritus, which could have borne nothing larger than a mouse. Parallel with this rock, and 100 paces distant from it, was another one more accessible, whence I suddenly caught sight of the game. An old ram stood exactly facing me, on a narrow ledge just wide enough for his feet to rest on. I fired, and my shot struck him behind the chest. He stood for a few moments tottering on the verge of the precipice. At length his strength failed him; first one foot, then another, gave way, and the handsome beast fell headlong down a chasm 400 feet deep. Sullen echoes resounded as he fell. The frightened herd did not know what to do, and after making a few bounds along the edge of the cliff, stopped. Another shot was fired, and a ewe this time fell into the same chasm into which the ram had preceded her.

It was an extraordinary sight. I myself could not help feeling moved at seeing two of these large animals fall headlong into the depths below. But the excitement of the chase prevailed. Again I loaded my rifle, and again sent two shots into the herd, now more than ever alarmed. In this way I fired seven times, till the animals were driven to

their last desperate extremity. They slipped down the side of the cliff, and jumped from a ledge eighty feet high.

Besides the Ala-shan mountains, the mountain sheep are found in great numbers in the range bounding the valley on the left bank of the northern bend of the Hoang-ho, but they do not inhabit the Munni-ula, or the other more northerly mountains of Mongolia. Towards the south this animal is very often met with in the mountains round Lake Koko-nor and in Northern Tibet, but here it assumes a different shape, and may be a separate species.

After a fortnight's stay in the Ala-shan mountains, we returned to Din-yuan-ing; here we determined to retrace our steps to Peking, in order to obtain fresh supplies of money, and other necessaries for a new journey. Unpleasant as it was, we were obliged to give up our intended journey to Lake Koko-nor, which was only 400 miles distant, i.e. less than a month's journey. Notwithstanding all our care, amounting almost to stinginess, we had less than a hundred lans (20*l.*) left in money on entering Ala-shan, and it was only by selling our merchandise and two guns that we could get enough money for the return journey; our Cossacks, too, proved untrustworthy and lazy, and with such a staff we could not undertake a new journey more difficult and dangerous than the one we had accomplished. Lastly, my passport from Peking only allowed me to go as far as Kan-su, and we might, therefore, be refused admittance to that province.

With deep feelings of regret, which can only be understood by the man who has reached the threshhold of his desires, without having the means of crossing it, I was compelled to submit to necessity and turn back.

NOTES.

[*All Notes signed Y. are by Colonel Yule, the remainder are by Mr. Morgan.*]

GREAT FLOODS IN CHINA.

PAGE 193.

THE Chinese annalists in the Shuking of Confucius relate, that in the sixty-first year of the great Emperor Yao (B.C. 2297), a contemporary of Abraham, a disastrous flood occurred, the waters of the Hoang-ho uniting with those of the Yang-tse-kiang, submerging the whole of the intervening country and putting a stop to agriculture and industry. The efforts of the Emperor and his great officers of state were directed to find some means of checking the floods and alleviating the wide-spread distress of the population; and Père Mailla, who visited these localities and compared them with the Chinese maps, was astonished at the gigantic nature of the works for draining the inundated districts, of which traces remained even in his time. How this great flood originated and what was the cause of it, history gives no clue; and few scientific travellers have, hitherto, visited the vast deserts lying to the north-west of the Hoang-ho. Is it not possible that the great migration of people, alluded to in the writings of Confucius, may in some way be connected with these early traditions? At all events, taking into consideration the sudden and destructive inundations in the lower course of the Hoang-ho in more recent times, and the terrible earthquakes to which China was subject in A.D. 1037, we cannot regard the great flood of China as an absolute impossibility, although science may throw more light on the subject hereafter.

The earlier inundation, referred to in the note, is of purely legendary origin. The time assigned for its occur-

rence, by Chinese writers, is about coincident with the Great Deluge. It is related that during the Fu-shi dynasty (3100 B.C.), a rebel of the name of Kung-kung caused a great inundation. This is an allegorical impersonation of the Evil spirit in the following legend, quoted by Klaproth :—Kung-kung proceeded with Chuan-shu to conquer the world; in his rage he struck a tremendous blow at Mount Pu-shan, which broke the pillars supporting the heavens and tore asunder the bands confining the earth. The heavens fell on the north-west, and part of the earth split off in a south-east direction, causing a great inundation, and this devastated the north-west of Central Asia and swept away the south-eastern part of the continent; the remains of which are the Australian islands of the present day.[1]

THE GANDJUR OR KANJUR. THE SACRED LITERATURE OF TIBET.

P. 211.

The collection of sacred books—the Tibetan Bible, is entitled *Kanjur*, i.e. Translation of the Word (of Buddha). It was translated entirely from Sanskrit originals in the eighth and ninth centuries, when the canon was closed. It consists of 100 volumes, in some editions extending to 108 vols.—oblong folios of separate leaves, 400–700 in each volume, unbound, placed between two rough boards, and fastened with a rude strap and buckle. The Kanjur contains not less than 1083 distinct works, which relate to the teachings of Buddha, and which were set down by three of his disciples, and after certain revisions formed into the present codex. It is divided into seven parts, each containing several volumes.

In addition to this great compilation—*the Bible of the Lama hierarchy*,—the Tibetans possess a still greater collection, called the *Tanjur*, i.e. Translation of Doctrine, in 225 folio volumes. This, however, is not included in the

[1] See Ritter's 'Erdkunde von Asien,' i. 158–160.—Deguignes' 'Hist. des Huns,' t. i. p. 7.

canon. It may be looked upon as a body of divinity, ethics, philosophy, grammar, logic, rhetoric, poetry, prosody, medicine, and alchemy, for the information of the Lamas. It probably corresponds to the Atthakathâs of the Southern Buddhists, the Singhalese, Burmese, and Siamese—but the Tanjur is much more extensive. It consists of two divisions, printed in the rudest manner in some editions, but some beautiful manuscripts exist of parts of each. The value differs according to the ink with which the manuscript is produced; a copy in red is 108 times more precious and efficacious than one in black; in silver, 108 times more availing than one in red; in gold, 108 times more effectual than in silver.

The Kanjur is found in many editions not only issued from Peking, Lhassa, Teshù Lumpo, Kunbum, and other sacred cities, but also from the presses in various monasteries.

The Tanjur is very rarely met with. It appears to have been printed for the first time in 1728–1746. Foucaux says that the collection was in existence in the beginning of the seventeenth century.

An ordinary copy of the Kanjur cost a few years ago, in Peking, 150*l*. The edition of the Emperor, Kien-long, was valued at 2,000 ounces of silver (600*l*.). M. Vassilieff paid for a copy of the Tanjur at Peking only 700 silver roubles (100*l*.). The Buriat tribe obtained a copy of the Kanjur for 7,000 oxen, and copies of the Kanjur and Tanjur together for 12,000 silver roubles. Complete copies of both these works are deposited in the Library of the India Office, having been given to the late Hon. East India Company by their agent, the resident in Nepaul, Mr. Brian H. Hodgson, to whom the Grand Lama presented them in appreciation of Mr. Hodgson's tolerant spirit and manner of treating with the Tibetan Buddhists.[1]

[1] See 'The Phœnix,' vol. i. p. 10, an article by the editor, the Rev. J. Summers; from which I have summarised the above particulars.—M.

SUPPLEMENTARY NOTES.

VOLUME I. PAGE 6.

COLONEL PRÉJEVALSKY here, and I think elsewhere, gives *Daban* as the Mongòl equivalent for 'mountain range.' In this I cannot but think he is mistaken. *Dábán* in oriental Turki (and presumably in Mongol, if it be a Mongol word also) means, not a *range*, but a *pass*, or what is in Savoy called a *col*. Thus, on one of the routes from India to Yarkand there is a pass called the *Yanghi Dábán*, 'the New Pass.' 'New Range' would be nonsense; but 'Yanghi-daban-Range,' as some maps have it, is lawful nomenclature.

The Pass is that feature in a mountain range which most interests travellers, and which they hear most frequently named; passes always have names; ranges, among people who have no books of geography, are apt to have none. Hence, with imperfect knowledge of the language, it gets assumed that the name of a Pass is the name of a Range.

This occurs in various languages. In maps of China we find mountain ranges called by such names as Pe-ling and Tsin-ling, as if *ling* were 'mountain range.' But *ling* is 'a pass.' Tsin-ling-*shan*, 'the mountain of the Tsin Pass,' would be right. Huc, again, in spite of all the monstrous Tibetan passes that he traversed, never discovered that *La* in Tibetan meant a Pass and not a mountain. And this leads him to his preposterous derivation of *Potâla*, or as he chooses to call it *Bouddha-La*, the Vatican of the Dalai-Lama, from Buddha-La, 'mountain of Buddha' (the words would really mean 'Buddha Pass'), with which it has as much to do as Ben Nevis with the hill-

country of Benjamin, or cream of tartar with Crim Tartary.[1]

Somewhat in like manner we have come to call various chains of mountains in India the Western Ghats, Eastern Ghats, and so forth; and I have seen it stated in a geography-book that *Ghat* means mountain. But *Ghât* really means a *Pass*. The plateau above and the plain below those passes were respectively known to the Mahommedan rulers as *Bâlâ-ghât* and *Pâyin-ghât*, 'Above the passes' and 'Below the passes.' Hence the Portuguese, and after them the English, attached the idea of *mountain range* to the word *Ghat*.—[Y.]

GIGEN.

P. 12.

This is the word used by our author for those ordinary 'incarnate' Lamas whom Huc calls *Chaberons*. The word is Mongol, and we find it thus explained in Kovalefsky's Dictionary: '*Gheghen* . . . éclat, splendeur; . . . brillant . . . personne vénérable; *titre honoraire d'un grave personnage*.' *Gegen Khutuktu* is one of the formal titles of the Great Lama at Urga spoken of in the text.[2]—[Y.]

[1] *Buddhala* is however older than Huc, for I see it is alluded to by I. J. Schmidt in his *Forschungen*, &c., 1824, p. 209.

The origin of the application of the name *Potala*, or *Potaraka*, to the palace of the Grand Lama seems a little obscure. The name is the same as that of the city in Sindh (Haidarâbâd), which the Greeks called *Pattalâ*. Koeppen says that, according to legend, the Sakya family, i.e. the family of Buddha, originally sprang thence. According to Buddhist stories there were two other sacred hills of this name. The first rose out of the Western Sea, and bore on its summit a celestial palace which served as a rest-house to the Bodhisatvas on their errands to earth. This is the true and heavenly *Potala*. Another lay in the China Sea opposite Chekiang, and is in fact the famous ecclesiastical island of *Puto* near Chusan.

[2] See Koeppen, *Lamaismus*, 376.

PEHLING AND FANQUI.

P. 41.

The footnote here, which says '*Pehling* is the Chinese for Englishmen, *Fan-qui* for Frenchmen,' needs correction. *Fan-Kwei* is simply the term usually rendered 'foreign devils,' and is applied to Europeans generally. *Pe-ling* appears to be a corruption of the Western Asiatic *Firingi*, i.e. 'a Frank,' a term which in some older Chinese notices appears in the form *Fu-lang*. *Pe-ling*, or *philing*, we know from Huc,[1] Hodgson, and Edgar[2] is the name which the Chinese at Lhassa give to the English in India, and it perhaps came to them through the Kashmiris and other Mahommedan traders to Lhassa.

'*Peh-ling Fan-qui*,' in the comprador's utterance quoted, means, I imagine, 'the Frank foreigners' who come by sea, in contradistinction to the Russ foreigners who come by land, and with whom the Chinese perhaps recognise something more of affinity.—[Y.]

KUMIZ AND DARÁSUN.

P. 54.

Col. Prejevalsky makes these two drinks identical, but he is surely wrong. *Darásun* is the Chinese rice-wine, or something analogous. Kovalefsky gives '*Darasoun*, Chinese hoang-tsieou . . . des boisson fortes; vin ordinaire fait avec des grains; vin jaune.' William de Rubruk gives a catalogue of Mongol drinks in the following words:—'Tunc ipse fecit a nobis queri quid vellemus bibere, utrum vinum vel *terracinam* [*darásun*], hoc est cervisiam de risio, vel *caracosmos* [*kara-kumiz*], hoc est clarum lac jumenti, vel *bal*, hoc est medonem de melle. Istis enim quatuor potibus utuntur in hyemè' (p. 305–6).—[Y.]

[1] '*Pélins de Calcutta*' (ii. 265).

[2] *Hodgson's Essays*, p. 68; *Rep. on Sikhim and Thibetan Frontier*, Calcutta, 1874, p. 17.

TARTAR MANNERS AT FOOD.

P. 56.

The uncleanly modes of Tartar eating impressed mediæval travellers as much as the moderns: 'And after they have eaten, or even whilst in the middle of their eating, they lick their fingers with tongue and lips, and wipe them on their sleeves, and afterwards, if any grease still remains upon their hands, they wipe them on their shoes. And thus do the folk over all those countries, including western and eastern Tartars, except the Hindús, who eat decently enough, though they, too, eat with their hands.'[1]—[Y.]

MONGOL ORIENTATION.

P. 64.

It seems likely that Colonel Prejevalsky has made some mistake about this right-hand and left-hand matter, from the want of good interpreters. Even if the fact were, as he says, that the Mongols never say 'to the right' or 'to the left,' but only 'to the east' or 'to the west,' this would be exactly what used to be alleged of North Britons, among whom, in former days, when a bench in church was crowded, you might have heard a request for a neighbour 'to sit *wast* a bit.'

If Colonel Prejevalsky will try to define the points of the compass to himself, he will find that *right* and *left*, with respect either to the rising or to the midday sun, are the ideas on which the meaning of those points ultimately depends.

Hence, in various languages we can trace that the words implying either North and South *or* East and West, are actually words properly meaning *right* and *left*. E.g. in Sanskrit we have *Dakshina* = 'dexter,' but applied to the south (whence *Deccan*), though the corresponding *sinister*

[1] *Friar Jordanus*, p. 10.

with the meaning of 'north' is lost. Klaproth (*Asia Polyglotta*) quotes the following explanation from a Mongol vocabulary:—'*Dzägun* (*Dzun*); the quarter in which the sun rises is called *Dzun*, i.e. the Left hand. It is also called *Dorona*.' And it is easy to understand how the Mongols, whose tents always faced the south,[1] should make the east left and the west right. Tibet Proper was called by the Mongols *Baron-tala*, the Right, i.e. West quarter, whilst Mongolia was *Dzun-tala*, the Left, i.e. East quarter.[2] It is not so easy to understand how Dzungaria (Dzungar = Left-hand) got its name, for that region is the most westerly part of Mongolia.[3]

The foregoing remarks indicate a probability that the Mongols of whom our author speaks were using the words *right* and *left* in their proper sense when he supposed them to be using the words *east* and *west*.

What Colonel Prejevalsky means by the Mongol north being our south I do not understand. In Chinese maps, as in our own medieval maps, I believe the south is generally at the top; and in the Chinese compass the needle is regarded as pointing *south*. To these circumstances perhaps he refers.—[Y.]

THE CHINESE YEAR.

P. 65.

The author's account of this matter is far from exact.

There are 12 'moons' or months in the ordinary year. These are some of 29 and some of 30 days, not alternating, but regulated by certain fixed rules, and the common

[1] *Marco Polo*, bk. i. ch. lii.

[2] *Ibid.*, 2nd ed., i. 216.

[3] The fact stated in the following extract of a letter from Mr. Ney Elias may be involved in the explanation: 'throughout the Altai I noticed that Khalkas, Kirghis, and Kalmucks all pitched their tents facing *East*. The prevailing wind there, in winter, is from the westward.' (*Dated* Aug. 2, 1873.) In such a region *left* would mean *north*, and Kovalefsky does give *Baron* as signifying *côté droite, midi, ou occident*.

year consists of 354 or 355 days. This, to keep the year in accordance with the sun, demands the frequent intercalation of an extra 'moon;' and of such intercalary moons there are 7 in 19 years. Thus, in 7 years out of 19 the year has 13 months. The year of 13 months consists of 384 or 385 days. This system of intercalation is believed to date from more than 2000 years B.C.

The first day of the year is not, as with us, a fixed day, but is a kind of movable feast, never the same two years running. It is the first day of that lunation during which the sun enters our sign *Pisces*. It may, therefore, be any day between January 22 and February 20, inclusive. Hence the first day of the year must be determined, before the correspondence of the moons with our calendar can be rightly assigned.

There originally was in all probability a year-cycle of twelve years, but the cycle in use for ages is one of sixty years. The years of the cycle are named by the combination of two series of characters, the one series being ten in number, and the other twelve. I do not know the meaning of the series of ten, which runs (1) Kea, (2) Yih, (3) Ping, (4) Ting, &c. The series of twelve consists of the names of animals, (1) Rat, (2) Ox, (3) Tiger, &c. If we call the first series 1, 2, 3, . . . 10, and the second series *a*, *b*, *c*, . . . *k*, in naming the years of the cycle they begin by combining the two series thus :—

1st year	1*a*
2nd „	2*b*
3rd „	3*c*
and so on to	10*j*
then	
11th year	1*k*
12th „	2*a*
13th „	3*b*
14th „	4*c*

Thus after sixty combinations you arrive again at 1*a*, which is the first year of a new cycle.

This system is employed to express not only the years of the cycle, but also months, days, and hours. It is applied

also to the points of the compass, and to any other expression of numbers in a series of ten or twelve.

And the Chinese days are not grouped into weeks of seven days, with definite names, but by cycles of sixty days.[1]—[Y.]

THE MONGOL ALPHABET.

P. 67.

So far as we know the earliest character employed by the Mongols for writing their own language was that which they borrowed from the Uighur Turks of the Kashgar country. This was the character commonly used in the chancery of Chinghiz-Khan and his immediate successors. This Uighur character had been borrowed from the old Syriac; and as we find names in Syriac upon the famous Christian monument of Singanfu (A.D. 781), there can be little doubt that it had been introduced into Eastern Turkestan by the Nestorian clergy.

A Lama, Sája Pandita by name, was employed at the court of Kublaï Khan (latter part of thirteenth century) in modifying this Syro-Uighur alphabet so as to fit it better to the Mongol language. He is said to have introduced the system of connecting the letters by continuous lines from top to bottom, 'like the marks cut on tally-sticks.' Some have alleged that even the old Syriac was written vertically; but in any case the language of William de Rubruk (1253), in speaking of the Uighur writing, most precisely describes the vertical direction of the modern Mongol script. Sája died before he had completed his alphabetic system.

His successor, Bashpa Lama, threw aside the Uighur model, and invented a square character founded on a Tibetan modification of the Devanagari. Kublaï himself persistently patronised this alphabet, and tried to force it into use, but it took no root.

Kublaï's successor, Temur or Oljaïtu Khan, commis-

[1] Substantially from Williams's *Observations of Comets . . . from Chinese Annals*, 1871.

sioned a relation of Sája, called Tsorji Osir, to translate the Tibetan sacred books into Mongol, with the use of Bashpa's alphabet. Finding this unmanageable, he reverted to the Uighuresque characters of his kinsman Sája, with some additions, but even so found it necessary to write many whole words in Tibetan characters. Some years later, in the reign of Khaishan or Jenezek Khan, the successor of Temur (1307–1311), who was a man of education, the task was resumed; and under his direction Tsorji brought the Syro-Uighur alphabet to perfection. This is substantially the character still in use among the Mongols, though some additions have been since made to it. The Manchu alphabet, again, was modelled upon this Mongol one.[1]—[Y.]

THE KHATA (*KHADAK*), OR CEREMONIAL SCARF.

P. 73.

The fullest notice of this curious usage in polite intercourse is given by Huc (ii. 85 *seqq.*):—

'There are *khatas* of all sizes and prices; for it is an article that the poor can dispense with no more than the rich. No one moves about without a little store of them. If you go to pay a visit of ceremony, or to ask a favour of anyone, or to return thanks for one received, you begin by displaying the *khata*; you take it in both hands and present it to the person whom you wish to honour. If two friends who have not met for a long time chance to forgather, their first care is the reciprocal offer of the *khata*; . . . also when a letter is written it is customary to fold up along with it a small *khata*. The finest phrases, the handsomest presents, all are of no esteem without the *khata*; with it, the most ordinary objects acquire an immense value . . . These *khatas* form an important branch of commerce for the Chinese of Tang-keu-eur (Tonkir). The Tibetan embassies never pass without carrying away a prodigious stock of them.' Bogle and Turner often mention the thing, but not the name of *khata*.—[Y.]

[1] See Abel-Rémusat, *Langues Tartares*.

OM MANE PADME HUM!

P. 76.

The following passages on this mystic formula are partly from Koeppen's *Lamaismus* (p. 59–60), and partly from an excellent article on Tibet in the 'Calcutta Review,' by Mr. Wilfrid Heeley, of the Bengal Civil Service, in which some paragraphs of Koeppen are condensed:

'Om mane padme hûm!—the primeval six syllables, as the Lamas say, among all prayers on earth form that which is most abundantly recited, written, printed, and even spun by machines, for the good of the Faithful. These syllables form the only prayer known to the ordinary Tibetans and Mongols; they are the first words that the child learns to stammer, and the last gasping utterance of the dying. The wanderer murmurs them on his way, the herdsman beside his cattle, the matron at her household tasks, the monk in all the stages of contemplation (i.e. of *far niente*); they form at once a cry of battle and a shout of victory! They are to be read wherever the Lama Church hath spread, upon banners, upon rocks, upon trees, upon walls, upon monuments of stone, upon household utensils, upon strips of paper, upon human skulls and skeletons! They form, according to the idea of the believers, the utmost conception of all religion, of all wisdom, of all revelation, the path of rescue and the gate of salvation! . . .

'Properly and literally these four words, a single utterance of which is sufficient of itself to purchase an inestimable salvation, signify nothing more than: "O the Jewel in the Lotus! Amen!" In this interpretation, most probably, the *Jewel* stands for the Bodhisatva Avalokiteçvara, so often born from the bud of a lotus flower. According to this the whole formula is simply a salutation to the mighty saint who has taken under his especial charge the conversion of the North, and with him who first employed it the mystic formula meant no more than *Ave Avalokiteçvara!*

But this simple explanation of course does not satisfy the Lama schoolmen, who revel in glorifications and multitudinous glossifications of this formula. The six syllables are the heart of hearts, the root of all knowledge, the ladder to re-birth in higher forms of being, the conquerors of the five evils, the flame that burns up sin, the hammer that breaks up torment, and so on. *Om* saves the gods, *ma* the Asuras, *ni* the men, *pad* the animals, *me* the spectre world of *pretâs*, *hûm* the inhabitants of hell! *Om* is 'the blessing of self-renunciation, *ma* of mercy, *ni* of chastity, &c.' 'Truly monstrous,' says Koeppen, 'is the number of *padmes* which in the great festivals hùm and buzz through the air like flies.' In some places each worshipper reports to the highest lama how many *om manis* he has uttered, and the total number emitted by the congregation is counted by the billion.

Grueber and Dorville describe *Manipe* as an idol, before which *stulta gens insolitis gesticulationibus sacra sua facit, identidem verba hæc repetens*: 'O Manipe, mi hum, O Manipe, mi hum; *id est* Manipe, salva nos!'—[Y.]

THE OBO.

P. 76.

Of the *Obo*, or sacred cairn of the Lamas, probably a relic of their primeval superstitions, a representation is given in Kircher's account of the journey of Grueber and Dorville, who characterise it thus: 'Trophæa quæ in summis montium cum adoratione magno Lamæ diriguntur, pro conservatione hominum et equorum.'[1]

Turner describes such a *trophæum* on the boundary between Bhotan and Tibet.—[Y.]

[1] *China Illustrata*, p. 70.

TSAGAN BALGAS.

P. 106.

The *Tsagan Balgassu*, noticed in Mr. Morgan's footnote, is a different place, being the *Chagan-nor* of Marco Polo, some 45 miles NW. of Kalgan. *Chaghan Balghassun*, or 'White Town,' is a term applied by the Mongols to all royal residences.[1]

The place mentioned in the text was on the banks of the Shandu- (or Shangtu-) gol, immediately north of the town of Dolon-nor; and one at first supposes that it must have been Kublaï's famous summer palace of 'Xanadu' or Shangtu, which almost occupies such a position, but is nearer NW. than N. of Dolon-nor. Moreover, the place stands on the left bank of the river, whereas we find Prejevalsky's *Tsagan Baigas* by his map to be on the right bank. I have little doubt that the site seen by Prejevalsky was that of another of Kublaï's foundations, called in his day *Langting*, of which Dr. Bushell wrote to me: 'The ruins of the city are marked on a Chinese map in my possession, *Pai-dzeng-tzu*, i.e. "White City," implying that it was formerly an Imperial Residence. The remains of the wall are seven or eight *li* in diameter (qy. circumference?), of stone, and situated about forty *li* NNW. from Dolon-nor.' 'All the points named do not correspond, but the name and position do seem to answer.—[Y.]

DUMB BARGAINING.

P. 145.

This kind of dumb higgling by finger pressure inside a sleeve or under a shawl, is found over all the longitude of Asia, from Peking certainly to Bombay, and possibly to Constantinople. I have suggested elsewhere[2] that a rumour of the use of such a system among the Chinese

[1] See *Marco Polo*, 2nd ed., vol. i. p. 287, and vol. ii. p. 9.

[2] *Marco Polo*, 2nd ed., ii. 486.

might have been confounded by Pliny with another system of dumb bargaining, related of many uncivilised nations, and have given rise to that strange statement of his about the *Seres*.—[Y.]

SHAMBALING.

P. 253.

Shambhala; called in Tibetan b*dé*-h*byung*, vulgo *de-jung* ('origin of happiness'), is a fabulous country in the north, the capital of which was *Kálapa*, a very splendid city, and the residence of many illustrious kings of Shambhala. It was situated beyond the Sita River, and the augmentation of the length of the days from the vernal equinox to midsummer amounted to twelve Indian hours (*gharis*), or four hours forty-eight minutes.

The Sita is one of the four mighty rivers of the Hindú mythological geography, into which the Ganges breaks after falling upon earth. It is regarded in the Vishnu Purána as flowing eastward, and would find its actual representative in the Tarim, continued to the ocean in the Hoang-ho; and the Chinese traveller Hwen-thsang does identify it thus. Csoma de Körös, however, interprets it in the Tibetan legend as the Jaxartes, and calculates the latitude of Kálapa as between 45° and 50°.

According to some of the Tibetan books, Dazung, a king of Shambhala, visited Sákya Muni, and the latter foretold to him a great series of the kings to succeed him, followed by the rise of Mahommedanism, and then by the general re-establishment and diffusion of Buddhism,—a prophecy which one is sometimes tempted to think is receiving its accomplishment in modern Europe. Some of the Tantrika doctrines were said in Tibet to have come from Shambhala.[1]

Sambhala is in Hindú mythology the place where

[1] See *Csoma Körösi*, in *J. As. Soc. Bengal*, ii. 57 &c.; *As. Researches*, xx. 488.

Kalki, the final incarnation of Vishnu, is to appear. It is identified by some with Sambhal, a very ancient Hindú town in Rohilkhand, which occurs in Ptolemy's Tables. We learn from Ibn Batuta that the last of the Mongol emperors of China sent an embassy to Sultan Mahommed Tughlak of Dehli, to obtain permission to rebuild a temple at *Samhal*, near the foot of Himálya, whither his (Buddhist) subjects used to go on pilgrimage. So it is probable that Sambhal may have been associated with these Tibetan legends, though lying in a wrong direction *from Tibet*.

When Mr. Bogle was at Tashi-lunpo the Teshu-Lama desired him particularly to inquire from the Bengal pundits about 'the situation of a town called Shambul' (*Markham*, p. 168).

In reference to the apparent identification that had been made between this mystic land of Shambaling and our own Isle of the West, I am tempted to introduce here (somewhat *à propos de bottes*, I confess) an anecdote extracted, once more, from the valuable letters of Mr. Ney Elias, to whom I have been so much indebted in the compilation of the Introductory Remarks to these volumes. After speaking of a wide-spread belief among the Mongols, and Chinese of Mongolia, in the existence of a race of people in the Alatau range who have the bills of ducks, my correspondent goes on:—

'What would a modern Japanese traveller, for instance, say, if he were to hear from the natives of Northern Mongolia that in unknown lands far to the westward, beyond the *Aros* (Russians) there existed a race called *Inglis*, who had but one leg of flesh whilst the other was of wood? He would doubtless regard the story as of a piece with that of the duck-headed mountaineers. . . . There has lived at X—— for many years past one solitary Englishman in the person of Mr. Z—— Z——, who has had the misfortune to lose one of his legs, and who is well known to the Mongols frequenting that border as an *Inglis*, or a western man who is not a Russian. . . . On my late

journey I met with a lama, a native of the neighbourhood of X——, who said he knew Mr. Z——, the *Inglis*; but when told that I was a countryman of his, was disinclined to believe it, on account of neither of my legs being of wood!'—[Y.]

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